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REMINISCENCES of an ARCHITECTURAL PRACTICE

An interview with Electus D. Litchfield

Illustrated by details from the work of Electus D. Litchfield & Rogers, Architects

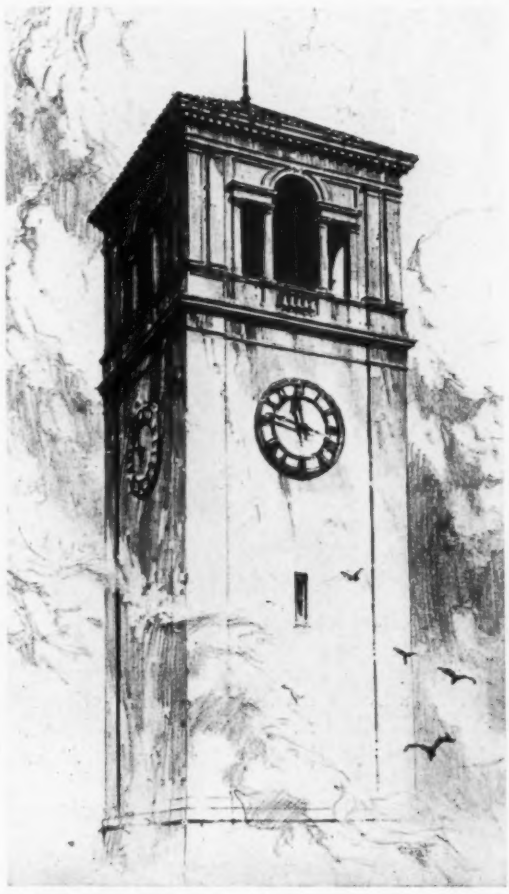
THOSE in the profession of architecture who intimately know Electus D. Litchfield, will appreciate the difficulties of an interviewer who called on him for the twofold purpose of securing examples of his work for illustration and of learning something of the mental attitude of the man.

Mr. Litchfield spent his student days among the great men in the profession. His connection with individuals and architectural firms whose work is standard everywhere in this country has imparted many of the characteristics that every thoughtful man acquires from such association. Approachableness is one of these.

Every man who engages in architectural journalism early learns to group the profession into two classes,—one that may be easily and freely approached and one that affects the utmost exclusiveness. And having arranged these classes and studied their personnel, he arrives at the conclusion that the big men, those who do the worth while things, are kindly and courteous, always willing within the bounds of reason to give of themselves, modestly and thoroughly.

The first class keep their appointments with the humble editor as punctiliously as with their most important client, the second are so keen to impress their importance that all other matters become secondary.

But, this very approachableness in men of the first class has its drawbacks when the editor seeks an interview, for, as in this present instance while we were trying to explain to Mr. Litchfield what we desired to have and to know, there was constant interruption. This is always true when the head of a successful organzation is his own executive, as he, of course, should be.



Tower designed to mask a tank for a water-system for Steinbach Stores, Asbury Park, N. J.

(Copyright, 1921, The Architectural and Building Press, Inc.)

Between the many interruptions and the telephone's vulgar "butting in"—is there anything more ill bred than a telephone?—we managed to learn the facts as to Mr. Litchfield's work that are here set down.

"While I am an architect," said Mr. Litchfield, "my earliest training was that of an engineer, in which profession I seriously engaged for a few years after leaving college, but almost at the outset of my engineering experience I became connected with important construction operations."

"Why, then," we interrupted,—interruptions seeming to be so much in style,—"did you abandon engineering for the practice of architecture?"

The reply, with a characteristic shrug of

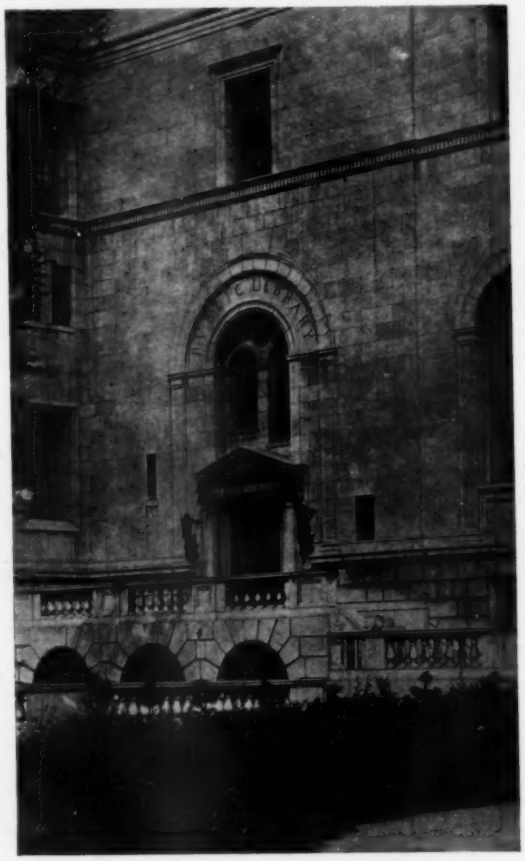
the shoulders was, "I knew that was where I belonged." Studying the man and thinking back over the important work in his present profession of architecture with which he has been identified, there is no question that the answer was a correct one.

Successful men in any profession are successful because they feel the "urge" towards the expression of certain things that give the possessor no rest until they are expressed. This is true of painters and sculptors, prose writing and poets and of architects.

It would not be possible to imagine a man of Mr. Litchfield's artistic impulses chained to the mathematics of engineering practice. Yet, if questioned on this point, Mr. Litchfield would probably stoutly contend, as have other men whose early training has been in engineering, and we have met many of them, that whatever of success he has achieved is largely due to the solid training he received as an engineer. One might digress here to some purpose in a discussion of methods of architectural education.

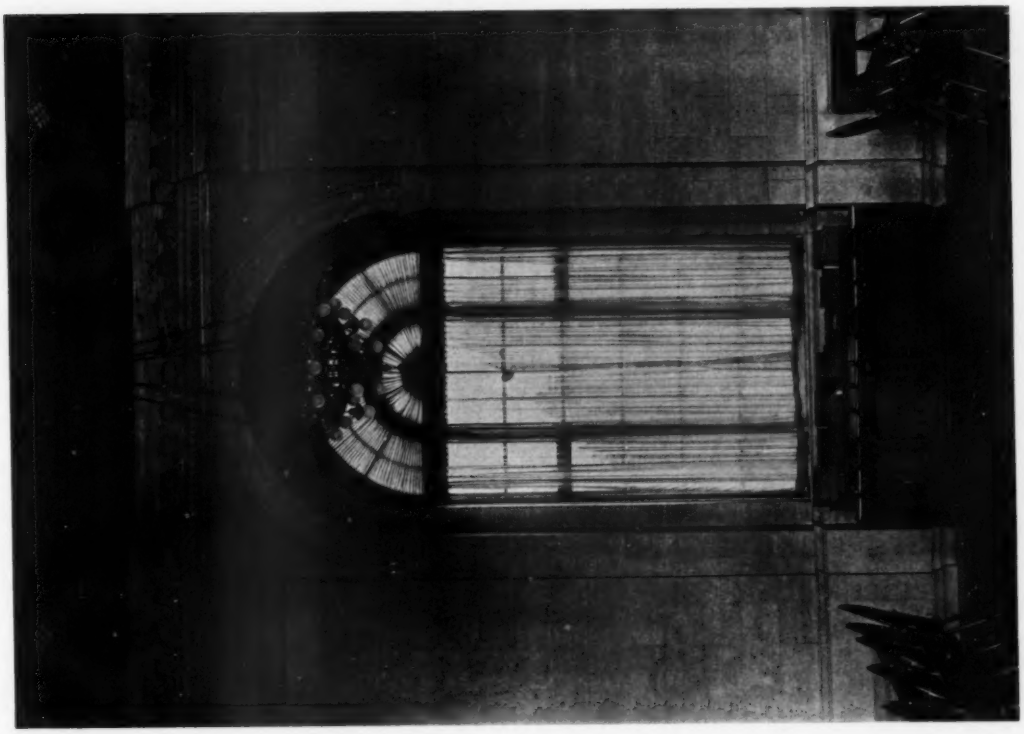
When Mr. Litchfield, urged by the interviewer, took up the subject of his artistic training in the profession of architecture, he became thoroughly interesting. He said:—

"When I abandoned engineering to take up an architectural career, I had the good fortune to enter upon my new profession with the firm of Carrere and Hastings, and under the direct tutelage of John M. Carrere himself. At that time their office was the rendezvous of a great group of brilliant young architects, students, and in many cases graduates of the Ecole Des Beaux Arts, who were to spread the gospel of the broad vision and the logical planning which has been the great gift of this school to the architecture of the world. The ever recurring motif in the teaching of both Carrere and Hastings, was that art, and in particular architecture, to be alive must be modern; that all art is a development and that while the architect might go back for inspiration to any of the great periods of the Renaissance, that never should the precedent be slavishly followed, but the work of today should be the logical development in accordance with the needs, materials and methods of the hour. The conditions which produced Gothic architecture, they felt, had entirely passed and modern Gothic, they held, was an anacronism. While I am inclined to believe that the so-called modern Gothic of that day was a dead thing, the kind of Gothic which we find in the work of Ralph Cram, and at any rate in that of Bertrand Goodhue, is a living thing. In those days McKim, Mead and White were in their zenith, and to a beginner, the refined, restrained and distinguished character of their work, based on Roman, Italian, Georgian and American precedent, was in strong contrast with the florid French architecture, which the American students had imbibed in Paris, together with their finer basic training in architectural planning.



Detail in Court, St. Paul Public Library

"The logic of the French principle of design and plan at once appealed to my mind with its engineering training, but the influence of a four years' residence in Philadelphia and its environs, and an ancestry in which Philadelphia and Salem were largely linked, were perhaps responsible for a greater enthusiasm for the detailed architectural expression of the work of McKim, Mead and White than for that of the other school. Following my experience in Carrere's office, ensued a period of eight years, first as associate and then as partner with Austin W. Lord and J. Monroe Hewlett. Few architects have as great ability in plan as Lord, and few more all around capacity than Hewlett. They were just recovering at that time from architectural dyspepsia incident to feasting upon Senator Clark's Fifth Avenue mansion, with the result that for a time their work



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EXAMPLES OF ARCHITECTURAL DETAILS FROM THE OFFICE OF ELECTUS D. LITCHFIELD & ROGERS, ARCHITECTS

was inclined to be ascetic. No one has more delightful appreciation of textures, colors, stuffs and other materials than has Hewlett, and in my association with him, I learned to appreciate the possibilities of brickwork, and the wonderful opportunities in the use of color, both in exterior and in interior design. In those days Stanford White was building Dr. Parkhurst's Church at Madison Avenue and Twenty-fifth Street, and from my office window, I could see him experimenting with the brickwork, the terra cotta, the tiles and the bronze electrolier upon the dome. Here was an ocular demonstration that a great master in architecture develops his design long

Stair Hall in house of Mr. Samuel Outerbridge, Oyster Bay, L. I., N. Y.

after the plans have been made and the contract let. From a commercial point of view, this can well be overdone, but I became convinced long ago that no great work of art in architecture is produced without the constant and affectionate interest and direction of the artist during the course of its construction.

"For five years I was a partner in the firm of Tracy, Swartwout and Litchfield and during this time, among other things, we won and built the United States Post Office in Denver. Tracy and Swartwout, like Lord and Hewlett, are graduates of the office of McKim, Mead and White and carried much of their traditions with them. Swartwout, too, was a careful student of the architecture of Greece and Rome and of the early American architecture as well.

"I first met Pliny Rogers when I entered upon this partnership. He had graduated from Cornell in 1906, and after short experiences in other offices had located with Tracy and Swartwout two years before I joined them. Later on when the firm of Tracy, Swartwout and Litchfield was dissolved and I decided to go it alone, Mr. Rogers came with me as associate, becoming a partner a few years later.

"As a result of our training and experience, there are a few basic principles which we hope are expressed in our work.

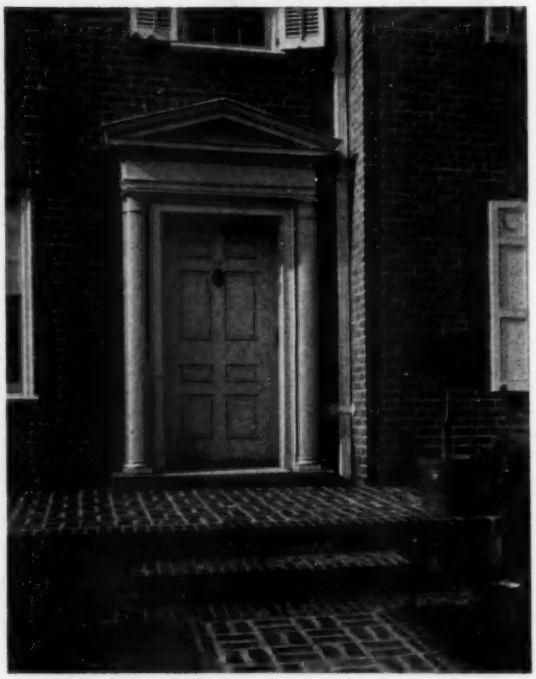
(1) That the principle of the dominating and logical plan for buildings as taught by the French School is absolutely basic in its correctness.

(2) That no work of lasting and living art can be produced in architecture unless there be built into it the actual soul and affection of the architect.

(3) That no work of a commercial nature is a real success architecturally unless it is a success financially.

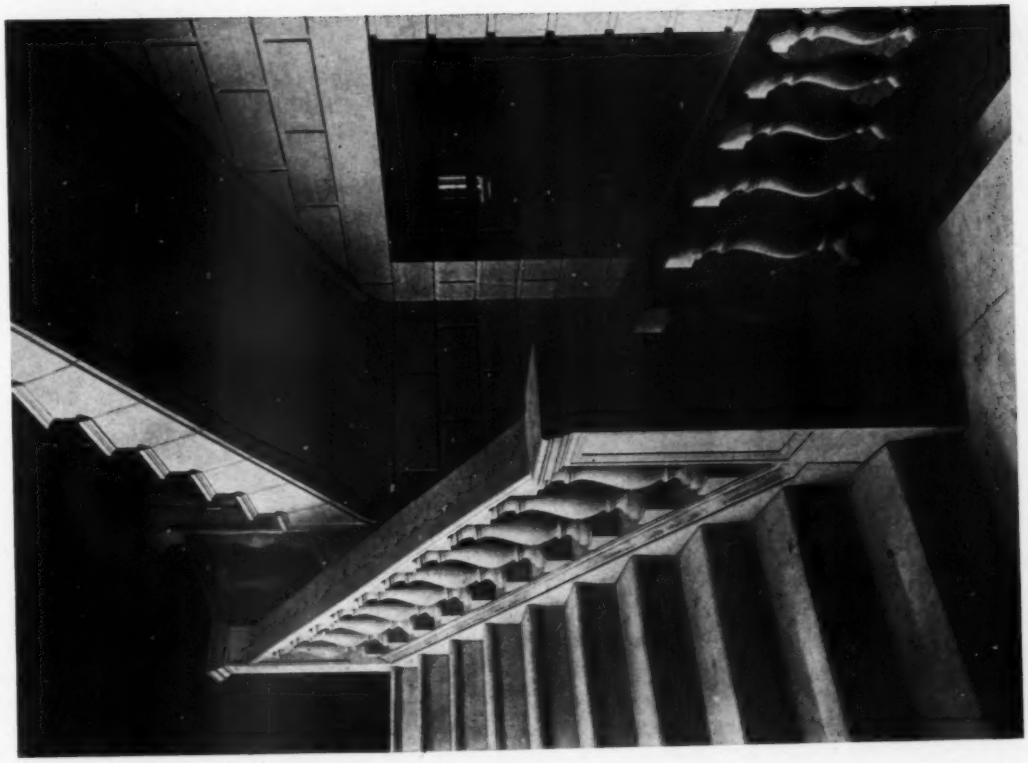
(4) That beauty in architecture bears no definite relation to cost; that it is more valuable to decorate with brains than with gold leaf.

(5) That the type of architecture appropriate to the American country side is the same type which has been historic in that country side and has given it its characteristic flavor; that for our American cities, the choice of McKim of Roman for governmental buildings and the Italian Re-



Detail of doorway of a house in Jamaica, L. I., N. Y.

LIBRARIAN'S ROOM



STAIRWAY DETAIL

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EXAMPLES OF ARCHITECTURAL DETAILS FROM THE OFFICE OF ELECTUS D. LITCHFIELD & ROGERS, ARCHITECTS

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naissance for other buildings for the fine arts, such as libraries, museums, etc., is good.

(6) That in its so-called Colonial work, America has a style as real as the French or Italian Renaissance, (and for that reason we have studied it deeply, searching it out, and in our country houses and smaller public buildings have developed it, endeavoring to obtain the charm so universally found in the work of the very early American architects.)

At this point a final interruption occurred. An insistent call terminated the interview.

To illustrate the work of Electus D. Litchfield and Rogers would require the space of a large bound volume. These architects seem never to despise the day of small things. Some of their smallest work has been so interesting that it has received publicity equal to other work of much greater bulk and general importance. Among the latter, we find factories, office buildings, the James J. Hill Reference Library and the Public Library at St. Paul, Minnesota, the preliminary drawings for the Roosevelt Memorial, the Denver Post Office, and that great war work, Yorkship Village, one, if not the only really successful housing development during the war.

HOMES MUST REPLACE SLUMS FOR THE GOOD OF INDUSTRY

IT is not in the slums of the Old World, but in the immigrant colonies of American cities that the homeless condition of the workers is the dreariest. This is the conclusion of a distiguished visitor who has just made a housing survey of the United States and Canada.

This investigator knows whereof she speaks, for her work has been in the Whitechapel district of London for many years. She is the widow of Canon Barnett, founder of the original Social Service Settlement, an institution so successful that 400 similar settlement houses have been established in this country. In an interview in the New York *Evening Post,* Mrs. Barnett said:

"They are only practical investors who insist that the industrial classes shall be lodged hygienically, in houses in which they can take pride and enjoy security. We"—she referred to her fellow workers, many of them capitalists—"expect to get back with incalculable interest the money we have put into bonds. These millions are not spent for a gentle whim. The time has come when the worker must be housed or industry cannot go on.

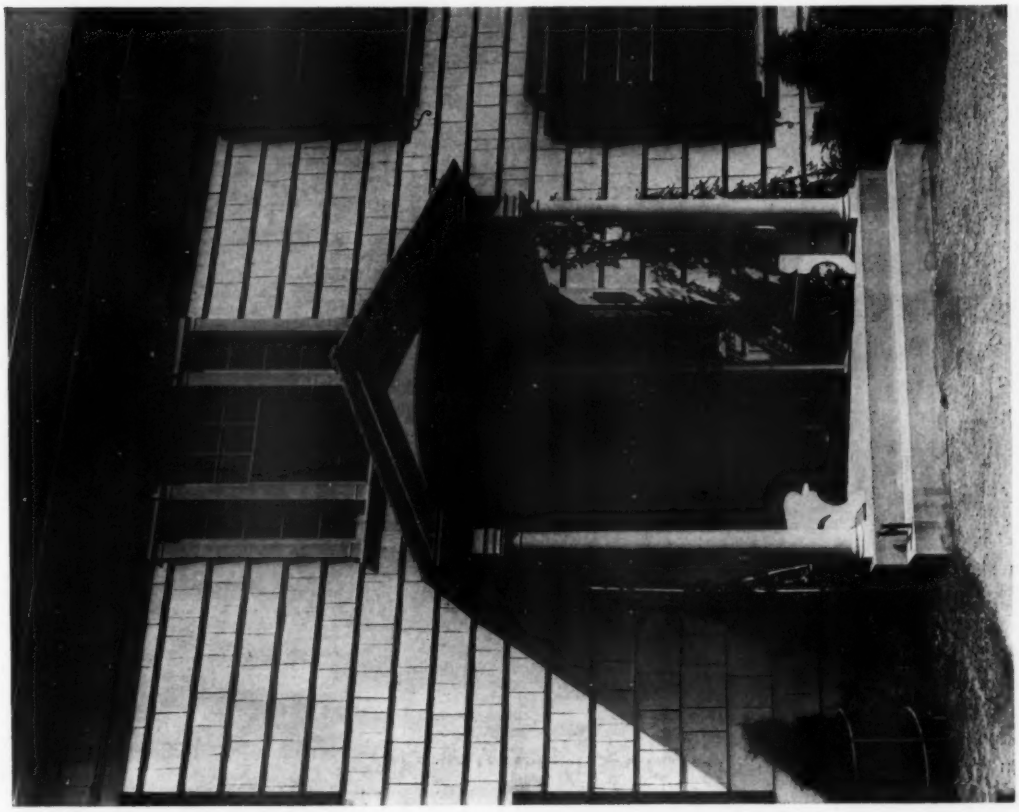
"I was shocked in going through the foreign settlements in New York to learn what they are charging these newcomers for a corner of a dark room. How can you hope to 'Americanize' a man who is not able to get a bed, let alone a home? It is as bad in your other great cities.

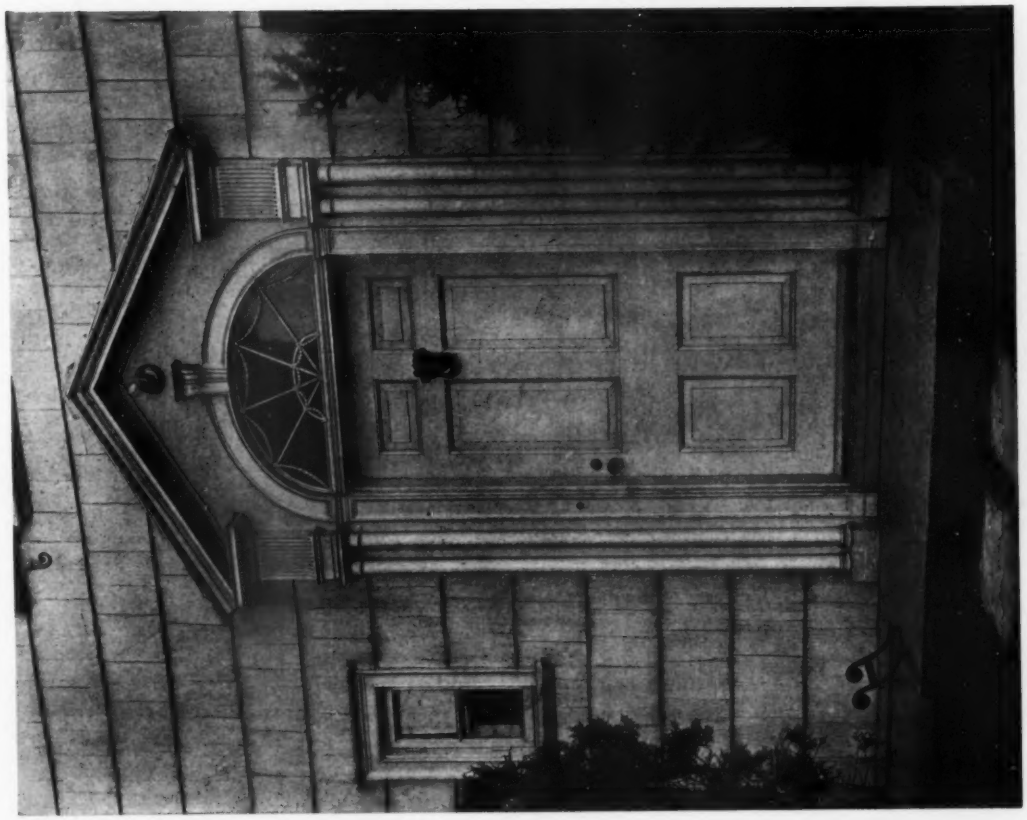
"Of course, the immigrants flock to the cities. You are making no organized effort to help them to get homes in the country. It is only natural that they should seek out those who, although they cannot share with them money, food or lodging, can at least speak their own language, pray with them according to their own religions and save them by comradeship from despair in their strangeness.

"Whatever were the other disadvantages of their home lands, the Italians, Spaniards, Armenians, Greeks and the rest had their sunshine. If their homes were dreary they could go out into cheery streets. Here they have no escape from the sordid misery of their surroundings.

"Every worker ought to have and can have a cottage, with a bath room and garden. I am surprised that you do not see how far a garden would go to Americanize these disillusioned immigrants from the south.

"People here have said to me—only think! 'Why, these foreigners are used to nothing better. They live voluntarily in these bad conditions. Every one has a chance to improve his home if he tries.' I cannot refrain from censuring this complacent social attitude, because it is the great reason why nothing is done, and out of this indifference and aloofness has come your terrible housing situation. In France, Belgium, Italy, in almost every progressive country, the state, having seen the necessity long ago, is building. You are better able than the rest to do it, but apparently you are waiting for a crisis before you begin. I think, after my travels here, that the crisis has come."





DETAILS OF DOORWAYS, HOUSE OF MR. SAMUEL OUTERBRIDGE, OYSTER BAY, L. I., N. Y.

EXAMPLES OF ARCHITECTURAL DETAILS FROM THE OFFICE OF ELECTUS D. LITCHFIELD & ROGERS, ARCHITECTS

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THE ART GALLERY OF OLD LYME, CONN.

CHARLES A. PLATT, Architect

An art gallery erected by a group of distinguished American painters, on the picturesque Main Street of a New England town, aptly called the "American Barbizon"

OLD Lyme in Connecticut, is on the East bank of the Connecticut River. It is about thirty-five miles East of New London. The picturesqueness of the town and its surrounding country has for many years lured the best of our American artists, many of whom have built their studios there and made Lyme their Summer home. It is now more than thirty-five years since the late Henry W. Ranger, one of our leading landscape painters first settled in this neighborhood. Following Ranger came other men, many of whom have also become famous painters.

Before proceeding to a description of Mr. Platt's admirable gallery, admirable because it exactly and artistically typifies the purpose of its erection, it may be well to write of Old Lyme and try to describe the characteristics of this fine New England town and its equally fine environment.

Years ago, when the nation was young, up and down the New England coast were many small towns whose chief industry was whaling. Sag Harbor, across the sound is one of these towns, New London another, but none could compete with New Bedford, which flourished until the discovery of mineral oil marked the passing of the whaling fleets. Many of these prosperous families whose fortunes were the result of successful whaling voyages, sought the towns that were located along the coast where they might build their stately houses.

Many of these families came to Lyme. The most influential and perhaps the wealthiest were the Griswolds. "Boxwood" was the principal house of the Griswolds, and it stands embowered in trees but a few paces from the fine old Lyme church, said to have been originally built from designs by Sir Christopher Wren.

Lyme during the late eighteenth century was, as it is today, a village of one street. But, on this one thoroughfare the villagers of Lyme have always lavished the most affectionate care and shown the finest respect for the town's traditions.

This street is embowered by the finest growth of elms to be found in any New England town. They cast throughout the entire day in summer a grateful shade and make the many well-designed Georgian houses, with their green shutters, a vista of beauty and set forth the refinement that has always characterized New England towns.

It is on this shaded street and amidst the most picturesque surroundings that the art gallery designed by Mr. Platt has been placed. There are of course many larger galleries than this, but there are not any, more correct in their architecture, more perfect in their setting, or better adapted to the purpose of their erection.

Any gallery designed for the exhibition of pictures when the lighting both natural and artificial has not been studied will not be a success. In this small gallery, Mr. Platt has, with characteristic artistic effort, given the most painstaking study. Artists declare the lighting is perfect. An overhead lighting has been planned, and so successfully that all trace of sunlight has been eliminated and every foot of wall space of the same exact value.

Naturally the people of Lyme take great pride in this architectural gem. Annual exhibitions to which only Lyme artists contribute have become the feature of each artistic year.

Some one has happily called Lyme "the American Barbizon." It is such in fact. Its wonderful wealth of picture making material, and that it is the home of many of our best known artists, make the simile very apt and proper.

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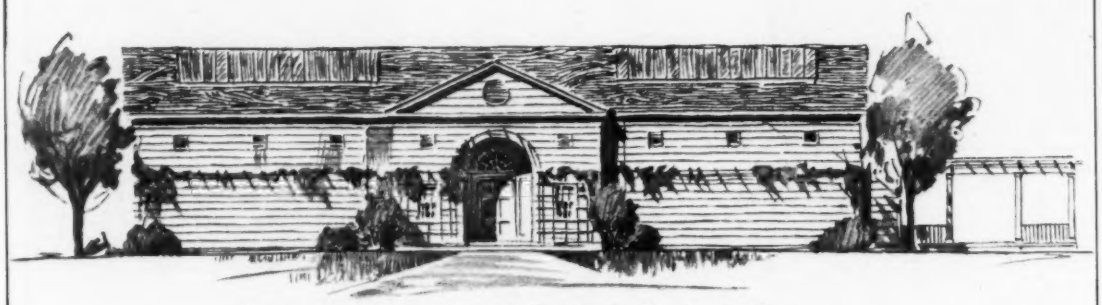
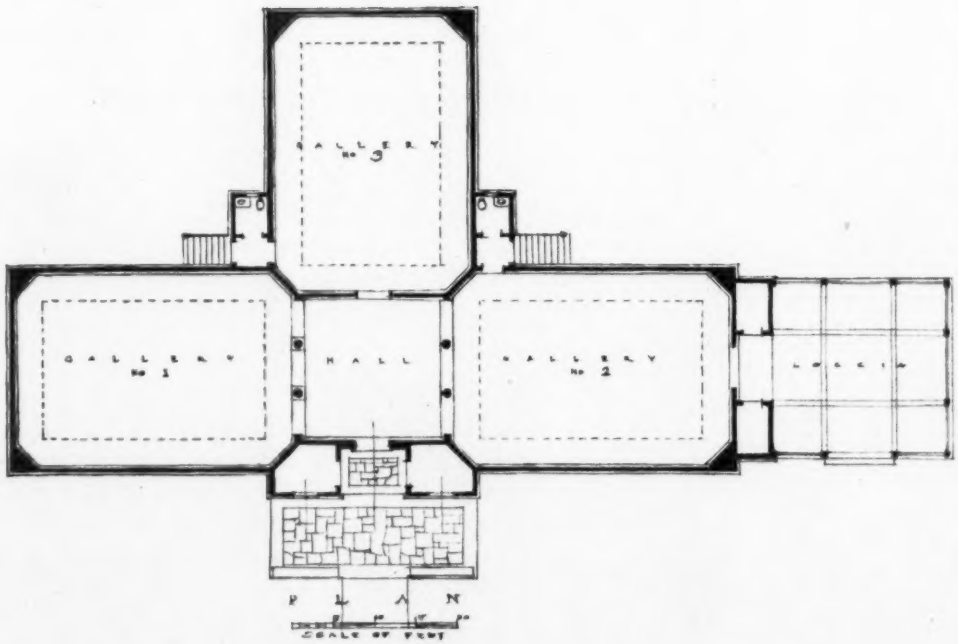


FRONT ELEVATION



LYME ART GALLERY

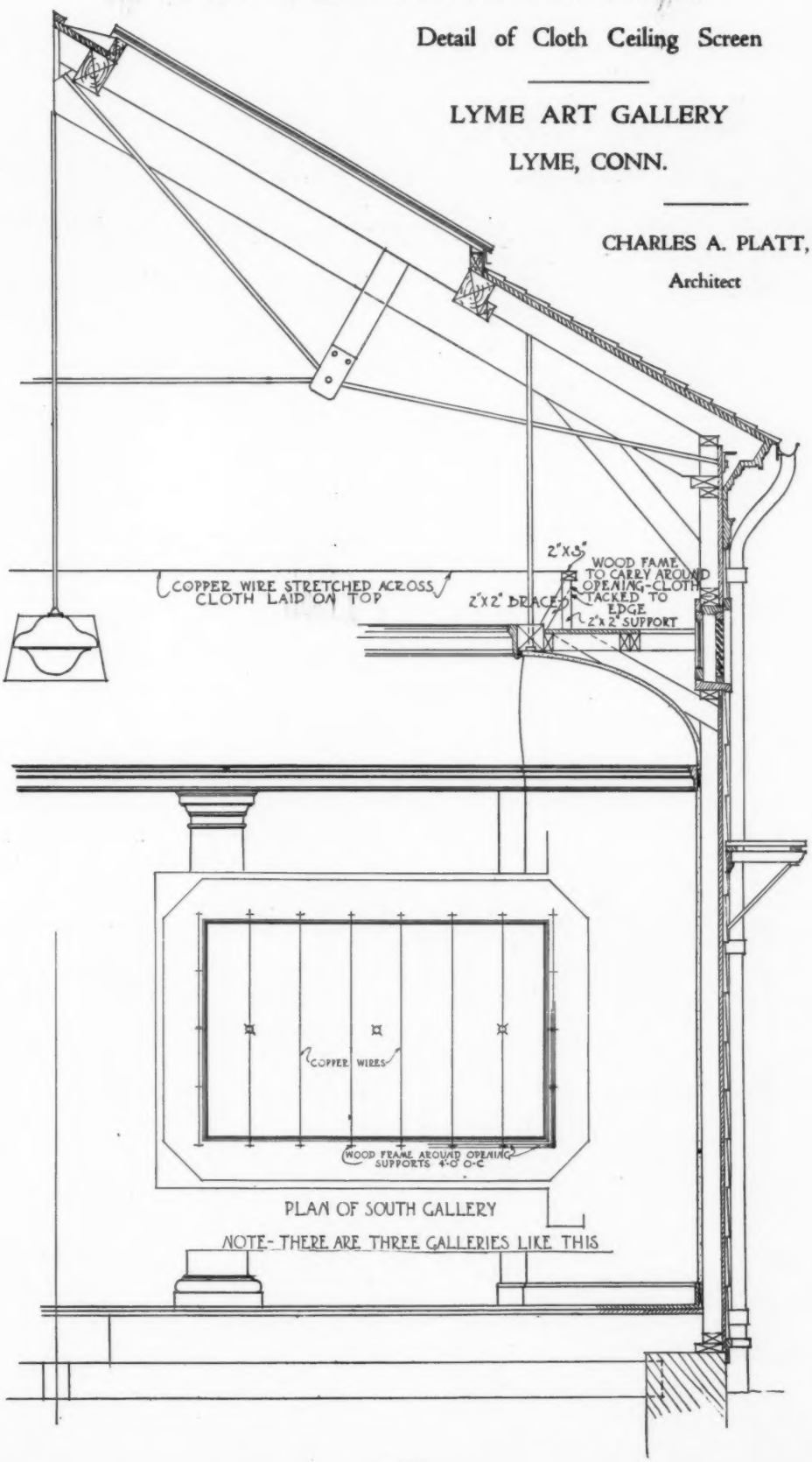
Charles A Platt Architect

Detail of Cloth Ceiling Screen

LYME ART GALLERY

LYME, CONN.

CHARLES A. PLATT,
Architect


2"X3"
WOOD FAME TO CARRY AROUND OPENING-CLOTH TACKED TO EDGE
COPPER WIRE STRETCHED ACROSS CLOTH LAID ON TOP
2"X2" BRACED
2"x 2" SUPPORT
COPPER WIRES
WOOD FRAME AROUND OPENING SUPPORTS 4'-0 O-C

PLAN OF SOUTH GALLERY

NOTE- THERE ARE THREE GALLERIES LIKE THIS

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Detail of a Church on Charles Street, Baltimore, Md.

(See reproduction of original sketch by Otto R. Eggers on opposite page.)

THE venerable church shown on the opposite page is the First Presbyterian Church of Baltimore. It was erected about 1817, from plans by M. Godefroy, Architect.

Baltimore abounds in notable ecclesiastical structures, and those dating during the early years of the nineteenth century have the attributes of good architecture that marked the period.

The artist who has drawn this notable series of early American architecture, and the writer who has added these brief notes of description, have, by intimate association with the work of these clever designers and builders, acquired a deep respect for it. If the publication of these sketches serves to impress on those who scan them, the great merit of the early architectural work in this country and the necessity for its careful preservation, the object sought has been attained.

A CHURCH ON CHARLES STREET, BALTIMORE, MD.
THE AMERICAN ARCHITECT Series of Early American Architecture

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MAIN ENTRANCE DETAIL

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(Reproduced from the original sketch by Louis Kurtz)

ELECTUS D. LITCHFIELD & ROGERS, ARCHITECTS

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DETAIL OF ENTRANCE

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ELECTUS D. LITCHFIELD & ROGERS, ARCHITECTS

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DETAIL IN THE COURT

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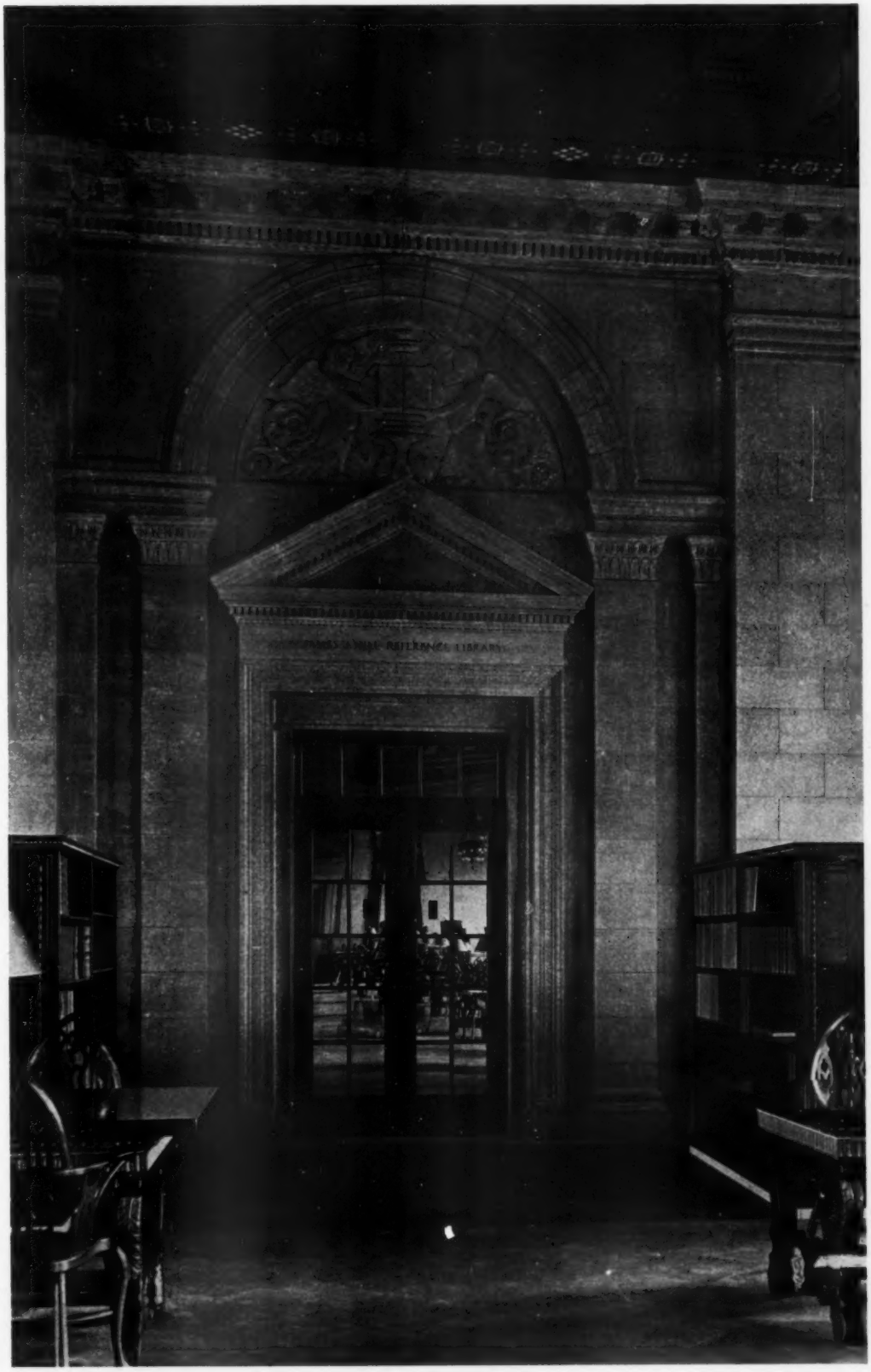

DOORWAY LEADING FROM READING ROOM
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ELECTUS D. LITCHFIELD & ROGERS, ARCHITECTS

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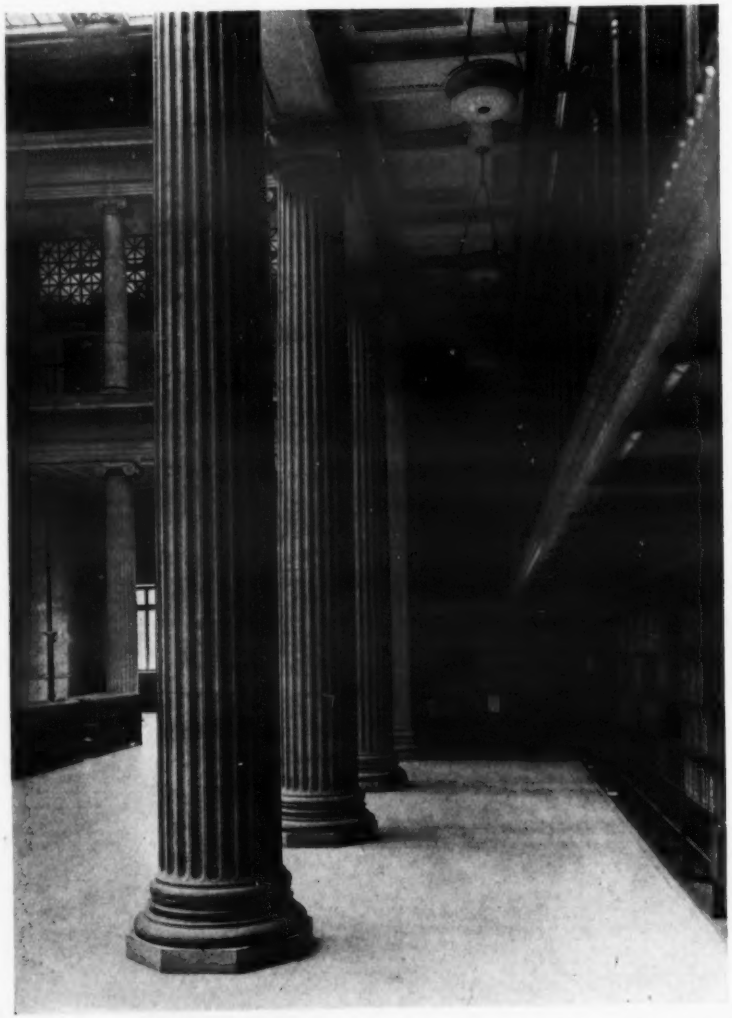

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POLYCHROME TERRA COTTA DOORWAY

LIGGETT & MEYERS BUILDING, NEW YORK CITY, N. Y.

ELECTUS D. LITCHFIELD & ROGERS, ARCHITECTS

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DOORWAY IN HOUSE OF SHERMAN L. DEPEW, BLOOMFIELD HILLS, DETROIT, MICH.
ELECTUS D. LITCHFIELD & ROGERS, ARCHITECTS

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COMMUNITY BUILDING, WATERTOWN, CONN.
ELECTUS D. LITCHFIELD & ROGERS, ARCHITECTS

DETAIL, COMMUNITY BUILDING, WATERTOWN, CONN.
ELECTUS D. LITCHFIELD & ROGERS, ARCHITECTS

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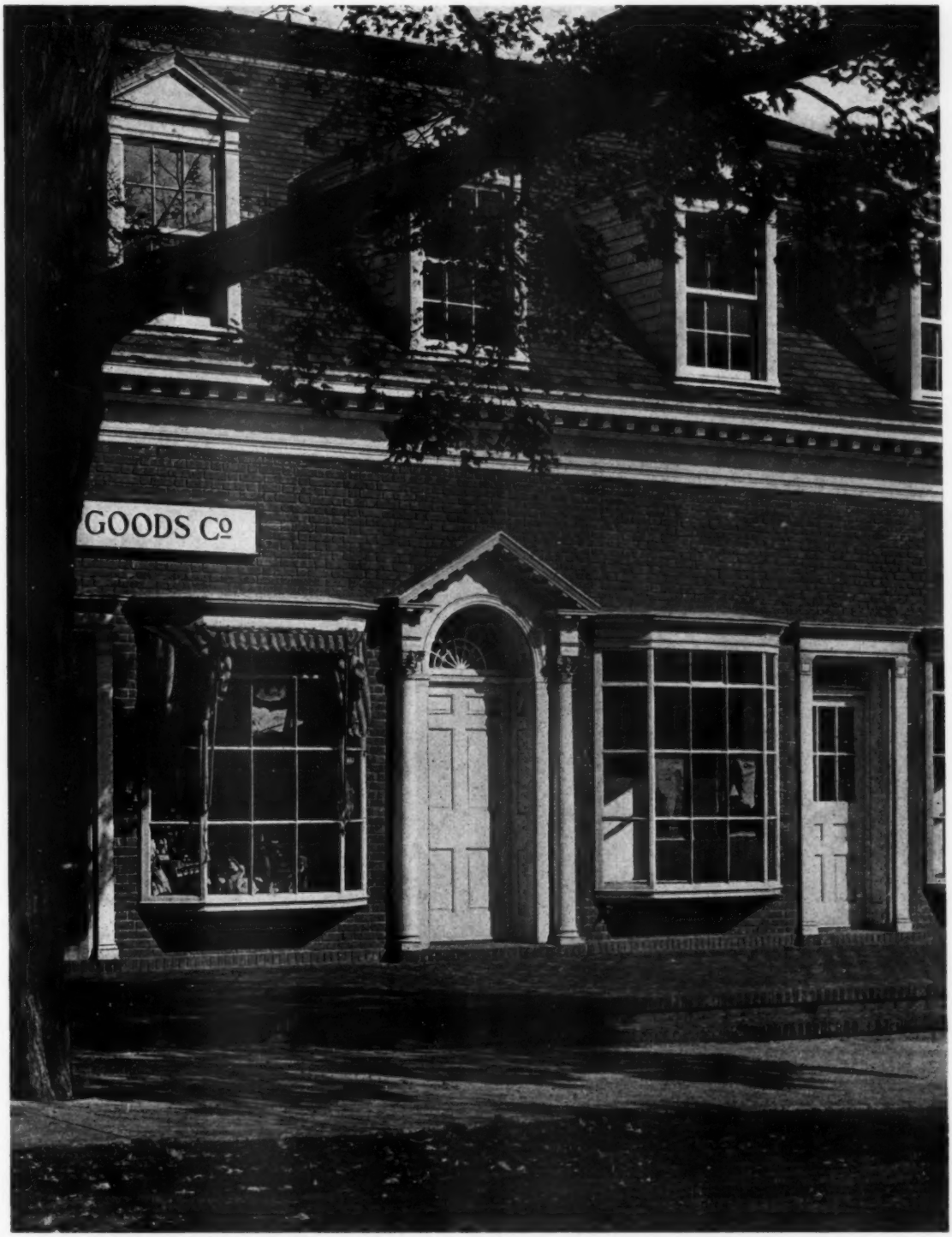
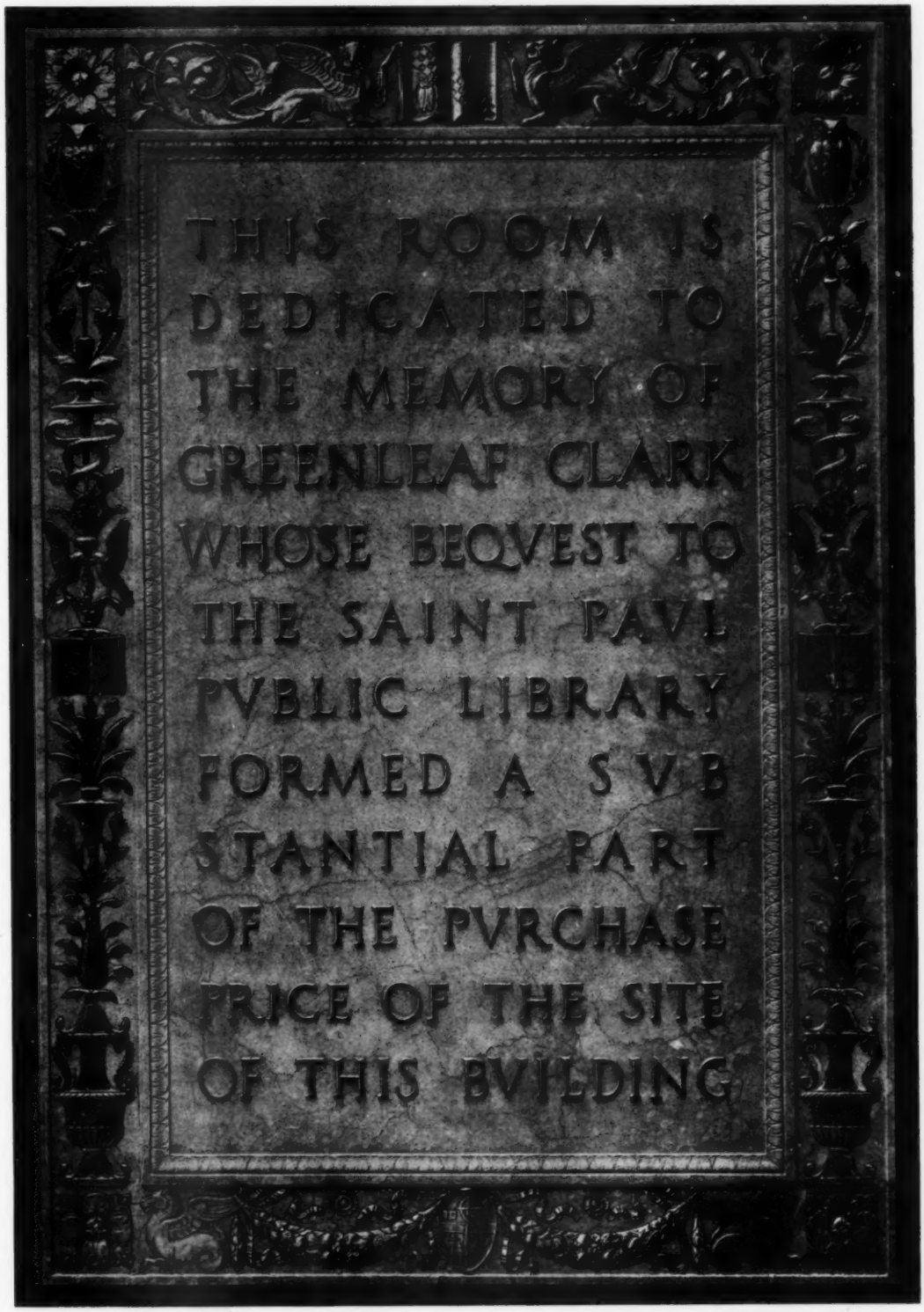


COMMUNITY BUILDING, WATERTOWN, CONN.
ELECTUS D. LITCHFIELD & ROGERS, ARCHITECTS



MARBLE AND BRONZE TABLET, GREENLEAF CLARK ROOM
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ELECTUS D. LITCHFIELD & ROGERS, ARCHITECTS

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·EDITORIAL·COMMENT·

Architectural Education

THE matter of architectural education is probably one on which the profession of architecture will soon have to act. Much discussion has been held, and very voluminous reports have been presented to conventions of the Institute and to meetings of State Societies. In all of these reports it is agreed that educational methods need revision. Some of them offer constructive suggestions. Men who have given this very important subject close study are agreed that present methods do not graduate students with the qualifications needed to enable them successfully to practice architecture as it is, or should be practiced today.

Since the World War started in 1917, things have moved with great rapidity. Methods then approved and put into practice are today obsolete. The profession has, or should have learned the lesson that the practice of architecture is what it always has been, an art, but that it has also become a very complex business. Architectural educational methods have not sufficiently changed to meet these altered conditions. While it is not necessary to say that the art of architecture is not merely design, it is necessary to warn against those who seem to think that it mainly is.

Possibly those who are averse to any radical changes in present methods are influenced by the fact that they have not sufficiently kept abreast with the times to enable them competently to appreciate these new conditions.

Discussing Architecture after the War, and with particular reference to Architectural education, C. H. Blackall, in a series of articles which appeared in *The American Architect,* stated:—

"We cannot postpone decisions as to what we shall do with ourselves and our profession. The decision must be made now and it must be made as far as possible so as to endure for the new era which is coming in. We may continue to theorize as to what it may be, but we are in the midst of an actual condition and we must trim our sails and plan our course accordingly."

Two years have elapsed since the above was written, and we are yet snugly berthed in indifference. We have neither trimmed our sails nor planned a course that leads to any definite end of our voyage.

If the methods of architectural education are to be revised and made modern—not left as now, archaic,—such revision should be made by architects themselves. While there is no intention to minimize the valuable work that has been carried forward by those in charge of our architectural schools, it is certainly true that the men who are actually engaged in practice and who receive into their offices the graduated students, best know those students' deficiencies and just what revision there should be in their training to make them better fitted to begin their life work as architects,—not designers, but master builders.

An opportunity for State Societies is now presented. The Institute, working through its chapters and covering the entire United States, has a bulky machine and a widely scattered territory. State Societies would be able to confine the revision of methods of architectural education to their own States and could get quickly and efficiently the results desired.

We should then have concrete examples to guide us in our selection of a method that would in the end be the best.

The laws governing the registration of architects and professional practice are largely the result of State Society efforts. Things have been done, ends have been attained. We shall undoubtedly soon have the profession safeguarded from within and without. The need is urgent. Why postpone action?

New York City's Works of Art

THOSE who dwell in New York should know what their Art Commission is accomplishing. A reliable way to secure this information is to obtain a copy of the recently issued Catalog of Works of Art Belonging to the City, prepared by the Art Commission.

The term "works of art," as belonging to a municipality was long so erroneously applied as to cause a smile of derision by those who know. Since New York created its Art Commission, municipal art in New York has meant art in its truest terms. We may not take pride in our forms of City government, we may feel shame when we regard the records of certain of our high office holders, but we shall find compensations in the efficiency of the work of our Art Commission. Ever since this valuable body was created, it has stood between the citizen and those who would foist on the City any form of art that was not good. Unfortunately there are bad examples of art owned by the City. These were acquired before the Art Commission came into existence. Their removal is prevented for many reasons, principally because it would create ill feeling on the part of a large number of people, some of them of foreign birth, who contributed to their cost. But, the later acquisitions,

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many of which are illustrated in this report, are absolutely worthy to be placed where they are and even the ultra-critical may not justly censure them.

We may take a very great pride in our Art Commission and it may stand in the future, as it has in the past, a fine example that every city in this country may with profit follow.

A Ministry of Art

THE American Magazine of Art, in an editorial discussing A Ministry of Art, reviews the work accomplished during the past twelve years by the National Commission of Fine-Arts, and arrives at the conclusion that it might be wise "to develop step by step along lines already advanced, rather than to start at the top and re-organize." This contention shares the same fate as any other with a faulty premise.

As it is understood, the proposition is to create a Ministry of Art, and not a Ministry of the Fine-Arts. There is a very wide difference between the two. An appreciation of the fine arts is in a sense a higher education of art. An appreciation of art, is to know, appreciate and encourage the development of the higher branches of craftsmanship.

To start with education in the fine-arts is exactly what the American Magazine warns against, a revision or reform, beginning at the top.

The work of the National Commission has been almost exclusively confined to an oversight and encouragement of the fine-arts. Architecture is the oldest and most important of these. And architecture depends more on the development of the art of the craftsman than does any of its sister arts. It will be futile for our great designers to evolve their masterpieces if they cannot find the craftsmen to execute them. Let us have a Ministry of Art, and let his appointment and the reasons for the creation of this department be so clearly stated that the vast number of people who ignorantly class art as architecture, painting, sculpture and music, learn that it also comprises the artistic quality of even the most commonplace things of every day use.

When those who indifferently regard the creation of a porte-folio of Art in the Cabinet of our President, understand the practical elements of such an office, they will be more likely to favor its creation. Those who rave about art, are those who retard its advancement. When sober-minded practical people—the architects' clients, for example—learn that art is not a luxury, but a necessity that has a large commercial value, they will be among the first to favor a Ministry of Art.

The hard-headed client doesn't enthuse much over the frenzies of art with which architects often seek to impress him, but if he can be shown that the addition of good art to his building will bring him an increased rental, the percentage of which he can figure with a stump of a pencil on the back of an envelope, he'll be keen for it.

If we are to develop an appreciation for art through the institution of a Ministry of Art, it will need to be along lines sound and practical, and not through hysteria and the "patter" indulged in by those who think they do, but really know nothing of the real elements of the things they rave about.

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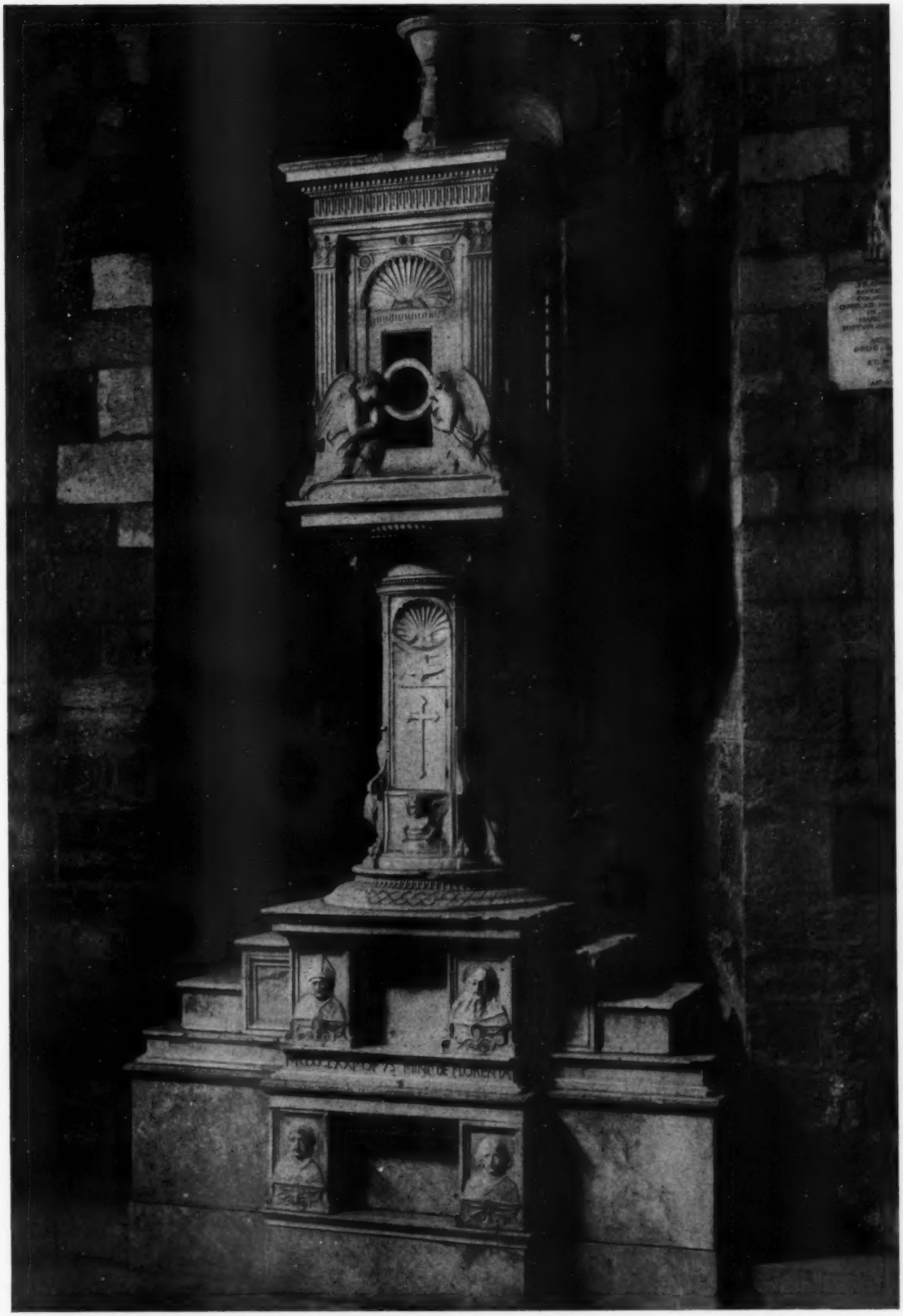

CIBORIUM IN BAPTISTRY, VOLTERRA, ITALY

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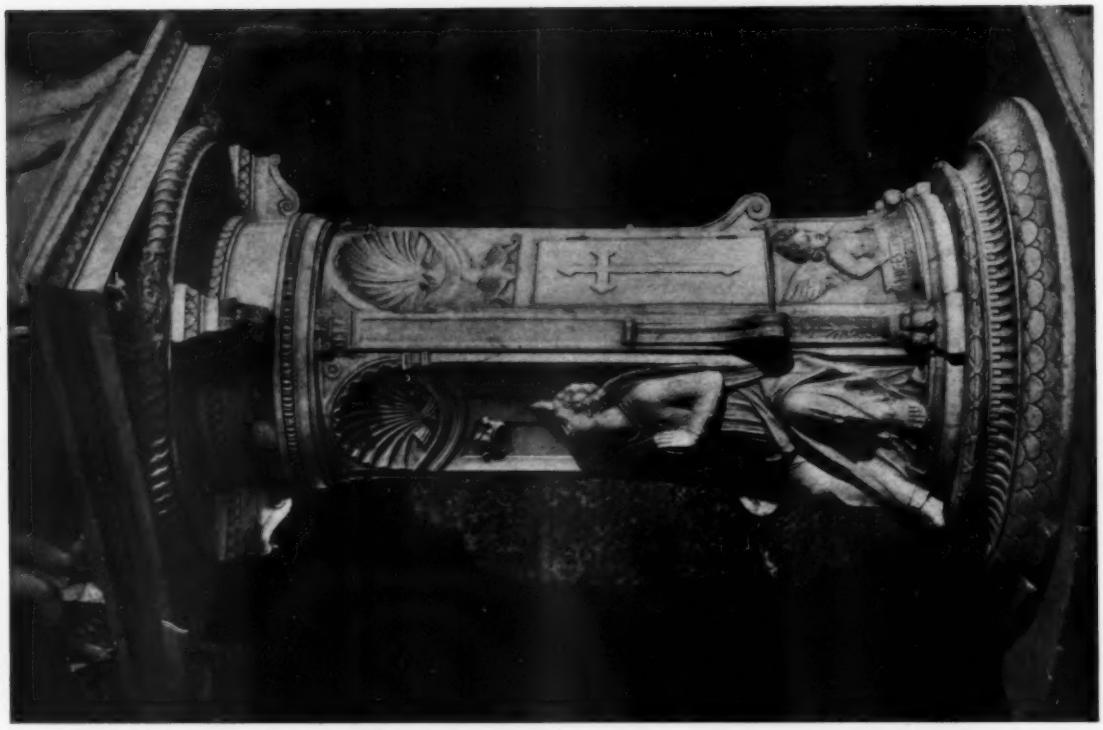
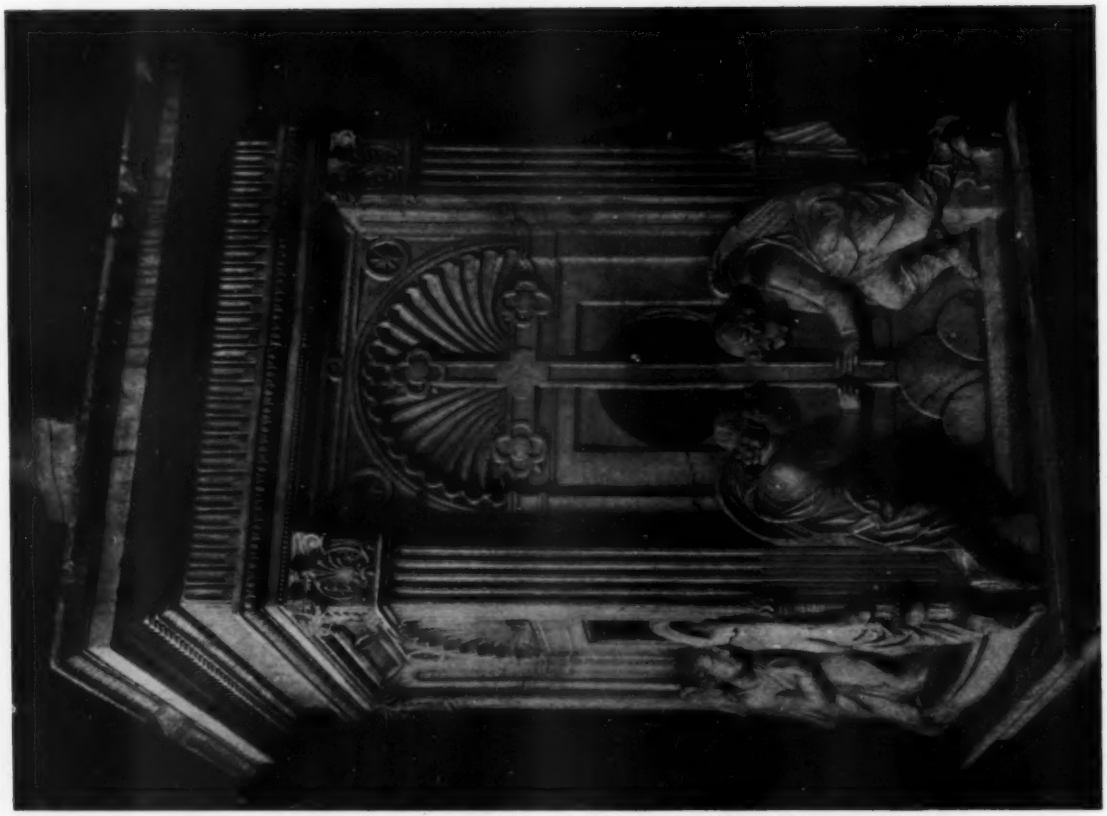
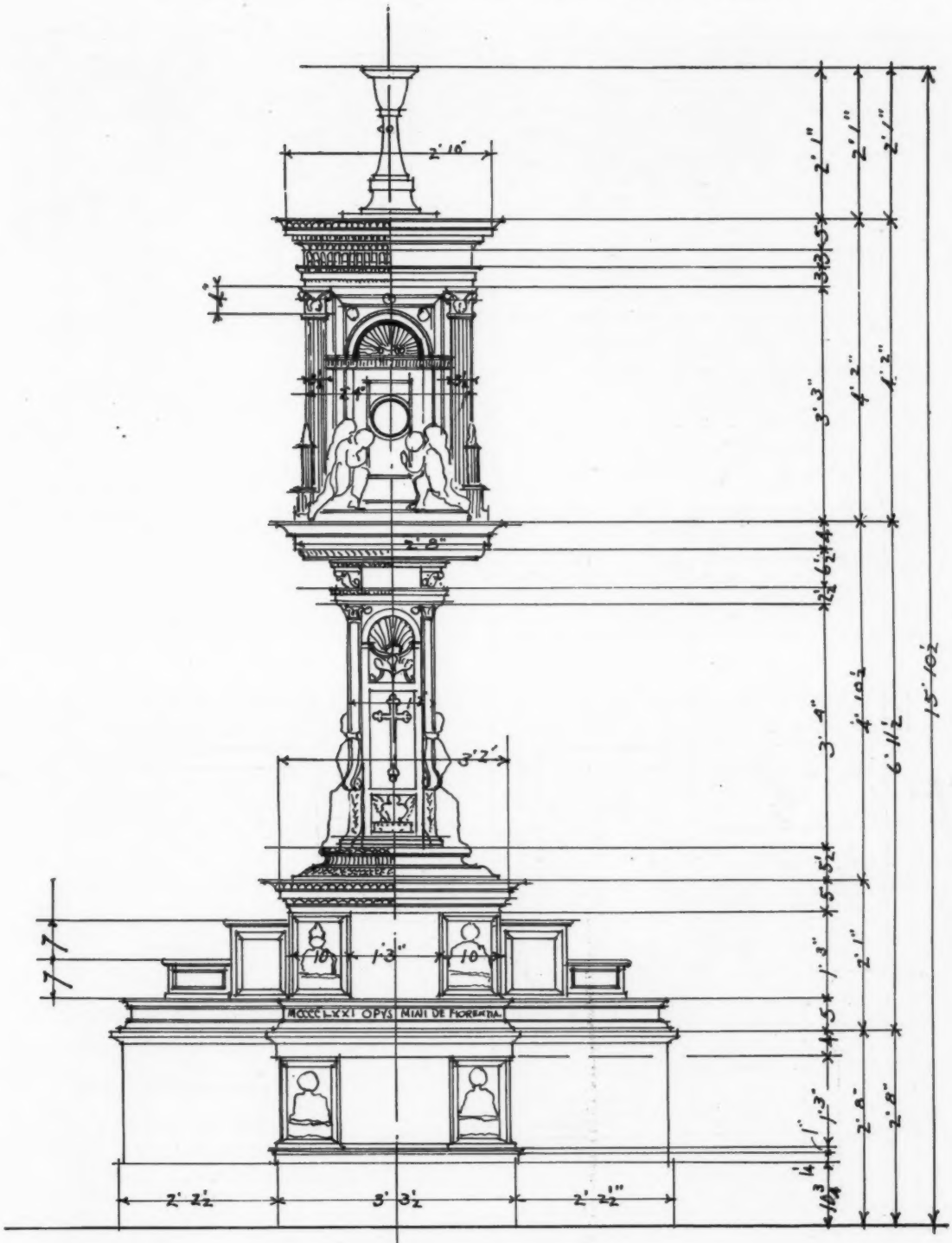




DETAILS OF CIBORIUM IN BAPTISTRY, VOLTERRA, ITALY



½" ELEVATION

CIBORIUM IN BAPTISTRY, VOLTERRA, ITALY

MEASURED AND DRAWN BY ROBERT M. BLACKALL, 35TH HOLDER OF ROTCH TRAVELING SCHOLARSHIP

THE AMERICAN ARCHITECT, SERIES II.
FRENCH AND ITALIAN DETAILS

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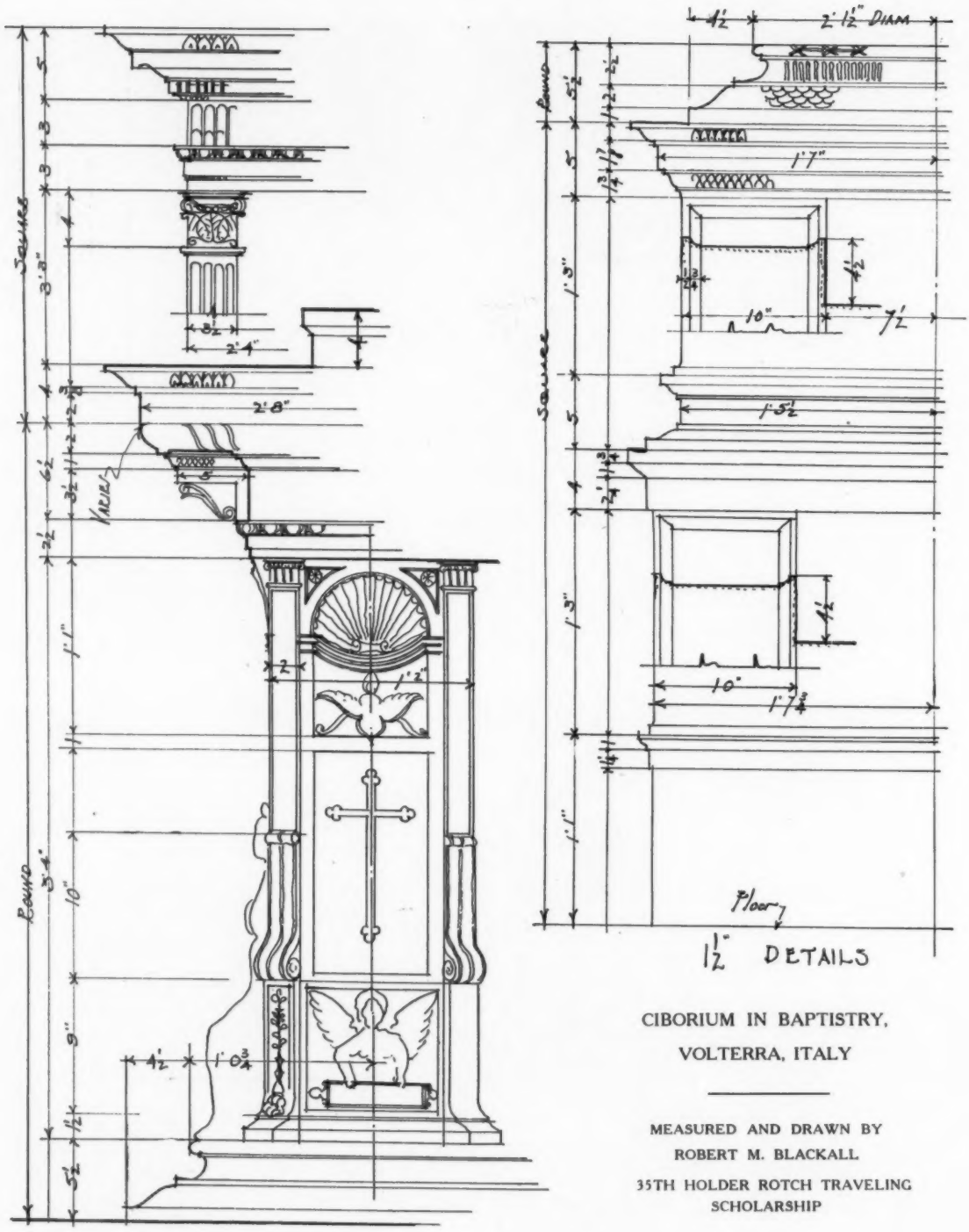

CIBORIUM IN BAPTISTRY,
VOLTERRA, ITALY

MEASURED AND DRAWN BY
ROBERT M. BLACKALL
35TH HOLDER ROTCH TRAVELING
SCHOLARSHIP

THE AMERICAN ARCHITECT, SERIES II.
FRENCH AND ITALIAN DETAILS

NOTES on the ILLUSTRATIONS

ART GALLERY, OLD LYME

CHARLES A. PLATT, ARCHITECT

A FEATURE of this gallery, shown in this issue, is its admirably arranged top lighting. In most of our modern galleries there is a place, called by artists "the morgue" where owing to poor lighting, the wall space becomes the least desirable place to hang pictures. As this space may not be left unfilled, artists await the opening reception with trepidation, fearing their canvases may have been hung in that undesirable place. There is no "morgue" in the Lyme Gallery. Every foot of wall space is equally well lighted. This is a source of satisfaction to every artist who sent pictures to the recent exhibition. The method employed to secure this desirable effect is shown in the detail drawing accompanying the article on this art gallery. The architectural excellence of this small art gallery is so apparent that further description is superfluous.

RECENT WORK FROM THE OFFICE OF ELECTUS D. LITCHFIELD & ROGERS, ARCHITECTS

SELECTIONS from the work of the office of Electus D. Litchfield & Rogers, illustrated in this issue, will not require further description to enable the reader to appreciate its excellence.

From time to time *The American Architect* and *The Architectural Review* will seek to present details of work in place of the stereotyped method of perhaps over-illustration of one example. It is believed the suggestive opportunities are much greater and the value more largely enhanced by presentation of a collection of good details. While, of course, it is the duty of an architectural magazine to present to its readers a review of recent commendable buildings, the practical value will be better maintained by omitting much that is believed to be extraneous and not pertinent to the complete exposition of good architecture and commendable design.

CIBORIUM IN BAPTISTRY

VOLTERRA, ITALY

AS soon as the Renaissance had taken root in Florence and had been accepted by the people with great acclaim, the details of this new style were developed quite as rapidly in the purely decorative works as in the monumental buildings. Altars, mural monuments, tabernacles, puppets and ciboria offered scope for the genius of the most distinguished artists. Lucca della Robbia (1442-1482), Mino da Fiesole (1431-1484) and Benedetto da Majano (1442-1497) excelled in this type of work. It was in work of this character that the Renaissance oftenest made its first appearance in a new center. This Ciborium from Volterra designed and carved by Mino da Fiesole in 1471 when he was forty years old is considered one of his finest works. Done in his prime of life and in good preservation at present, we can enjoy this little monument as one of the best of its kind in existence.

THE SOCIETY OF LITTLE GARDENS

Program of a Competition for the Design of a Garden Treatment for the Typical Suburban Backyard

THE SOCIETY OF LITTLE GARDENS, of Philadelphia announces a competition in the design of a garden treatment for the typical suburban "backyard."

The purpose of the competition is to procure one or more designs which may be presented to the public to stimulate and guide the development of the out-of-doors space of the average American dwelling-house and to bring it clearly within the meaning of the word "home," now too generally limited to the space within four walls.

All students of the garden problem are invited to submit designs under the terms of this program, this invitation comprehending professional garden designers, draftsmen and students in schools of architecture and landscape design. Nor is the amateur garden lover excluded, provided only that his ideas are presented in the technical form prescribed.

Garden design has long stood as a recognized phase of the profession of architecture, but its benefits have been restricted, by the cost of professional services, to the owners of properties of the more costly type, and have extended to the general public only through their parks and playgrounds. It is here the purpose of the Society of Little Gardens to offer to the average small house owner, without cost, an aid in the form of suggestive sketches, to be obtained through this competition. In so doing, the Society recognizes that the competitors will have rendered to the public a service of substantial value, and it therefore proposes to compensate in part for this service by the payment of an honorarium to each of the authors of

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the three designs selected in the judgment and also to include in the publication of each the name of its author, with its place in the competitive award. The honorarium will be as follows: To the author of the design placed first, one hundred fifty dollars ($150.00); to the author of the design, placed second, one hundred dollars ($100.00); and to the author of the design placed third, seventy-five dollars ($75.00). Honorable mention, in the discretion of the jury, may also be awarded, but designs so rated will be published only with the written consent of their authors.

The designs will be judged by a jury to be composed of Wilson Eyre, Jr., Warren P. Laird, and Horace Wells Sellers, who have prepared the program and are acting as the professional advisors of the Society. Should a vacancy occur in the membership of the jury, it will be filled by an architect selected by the remaining members.

Copies of this program may be obtained upon application to Mrs. Charles Davis Clarke, president, 2215 Spruce Street, Philadelphia, Pa.

SOCIETY OF BEAUX-ARTS ARCHITECTS

OFFICIAL NOTIFICATION OF AWARDS—JUDGMENT OF AUGUST 16th, 1921

FINAL COMPETITION FOR THE 14th PARIS PRIZE

PROGRAM

The Annual Committee on the Paris Prize proposes as subject of this Competition:

"AN EXHIBITION CENTER"

A rich municipality in developing its city plan, proposes to give great importance to a center for exhibitions and assemblies. It is convinced that not merely national but international prominence will be given to the city which provides, in a magnificent manner not hitherto realized in America, facilities for great political, religious, or industrial conventions and assemblies and exhibitions of all kinds.

Therefore, at a point where important avenues and streets converge, a circle with a radius of 750 feet has been drawn and the ground within its circumference left free for the placing of the contemplated construction. It is proposed to erect here a building or a group of communicating buildings which may be used as a unit or separately.

The requirements are:

(1) A *Great Hall* to be used for industrial exhibitions, horse shows, athletic meets, horticultural exhibitions, etc. The clear floor area in this should be not less than 50,000 sq. ft., around which should be disposed exhibition galleries which may be converted into seating space when required.

(2) An *Art Gallery* adapted to annual exhibitions of national and international scope and loan exhibitions of different kinds, such as painting, sculpture, architecture, furniture. Certain of these galleries should be lighted from windows in the wall, others from overhead. The floor area of this should be in the neighborhood of 30,000 sq. ft., disposed on one or more floors.

(3) An *Auditorium* with a seating capacity of 10,000 for public meetings, concerts, etc.

(4) An *Enclosed Space* available in connection with these units where, in the open air, concerts could be held and sculptural and horticultural exhibits shown in connection with those held under cover.

(5) A *Restaurant*, installed somewhere in the group, to serve visitors during the time of exhibitions or assemblies.

The facilities for entrance, circulation, and exit should be carefully considered in connection with these buildings as they will necessarily vary according to the functions of the different elements included. At times the whole group will be used for a single purpose, at other times there will be separate or simultaneous use of the different units.

Jury of Award—J. W. Cross, R. M. Hood, P. Sawyer, J. G. Rogers, W. F. Lamb, C. Z. Klauder, E. Swartwout and H. O. Milliken, Chairman.

Number of Drawings Submitted—5.

AWARDS:

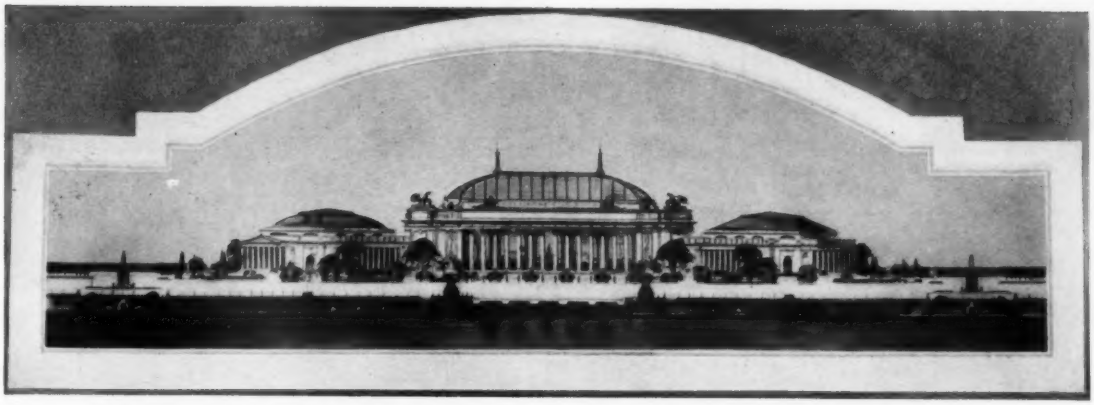
PARIS PRIZE WINNER (1st Medal)—Lloyd Morgan, Atelier Hirons, N. Y. C.

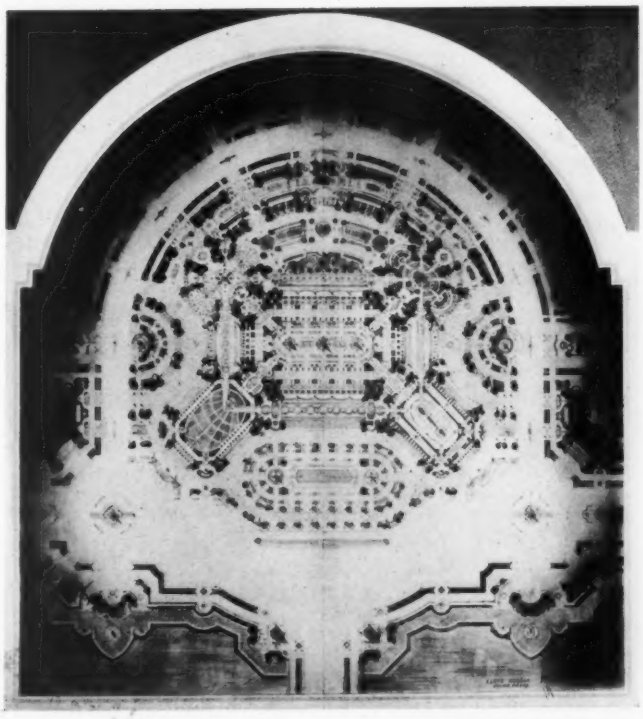
PLACED SECOND (1st Medal)—J. G. Schuhmann, Jr., Columbia University, N. Y. C.

PLACED THIRD (2nd Medal)—A. E. Westover, Jr., "T"-Square Club, Phila.

PLACED FOURTH (2nd Medal)—H. S. Atkinson, "T"-Square Club, Phila.

PLACED FIFTH (2nd Medal)—R. A. Fisher, "T"-Square Club, Phila.





LLOYD MORGAN — PRIZE WINNING DESIGN (FIRST MEDAL) — ATELIER HIRONS

FINAL COMPETITION—14TH PARIS PRIZE—SOCIETY OF BEAUX-ARTS ARCHITECTS

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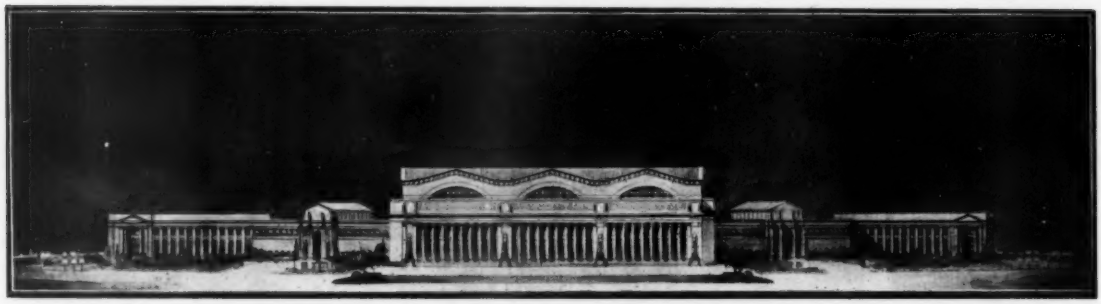
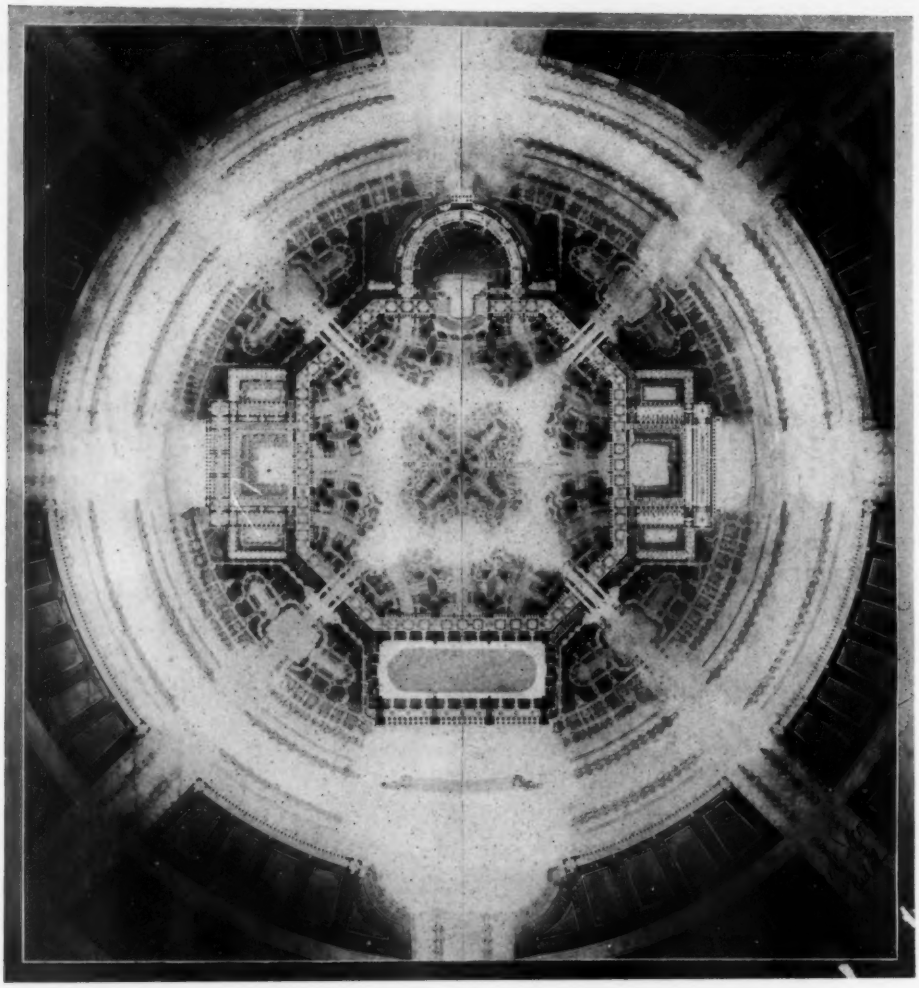
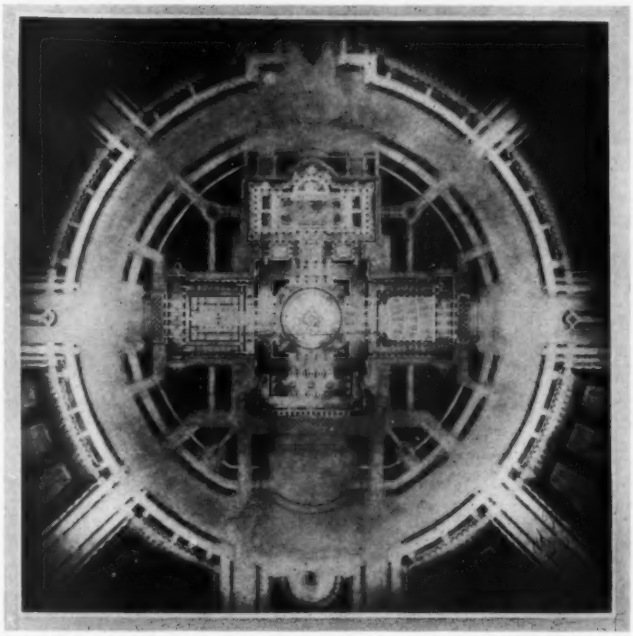
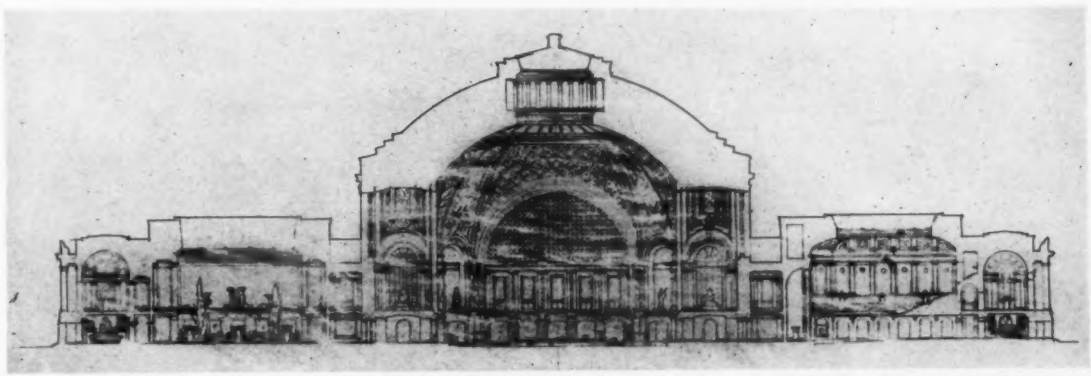




J. G. SCHUHMANN, JR. PLACED SECOND (FIRST MEDAL) COLUMBIA UNIVERSITY

FINAL COMPETITION—14TH PARIS PRIZE—SOCIETY OF BEAUX-ARTS ARCHITECTS





E. E. WESTON, JR. PLACED THIRD T. SQUARE CLUB

(SECOND MEDAL)

FINAL COMPETITION—14TH PARIS PRIZE—SOCIETY OF BEAUX-ARTS ARCHITECTS

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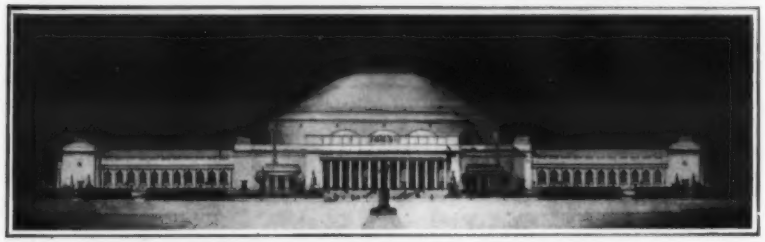
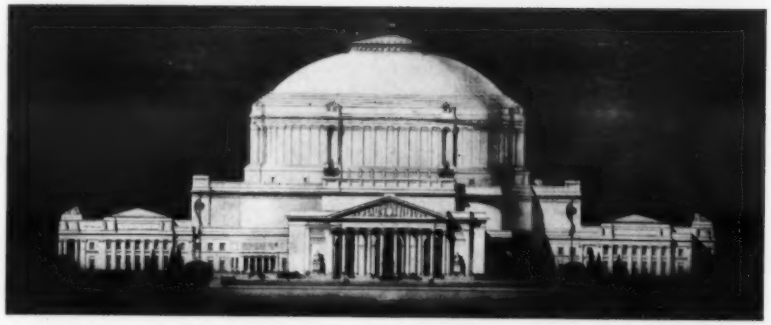
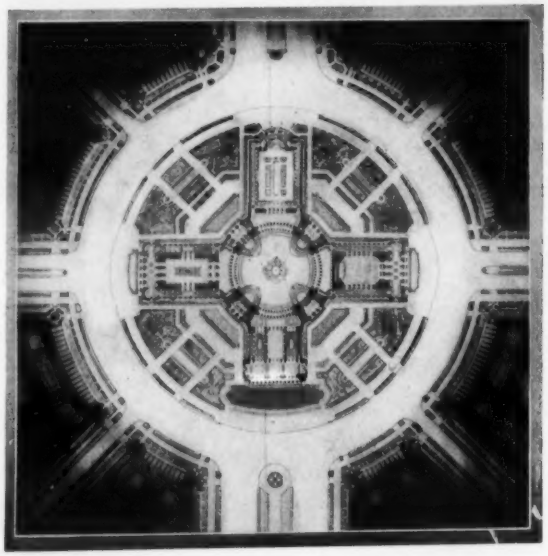
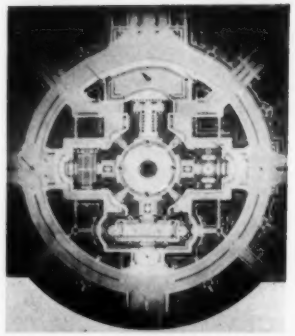
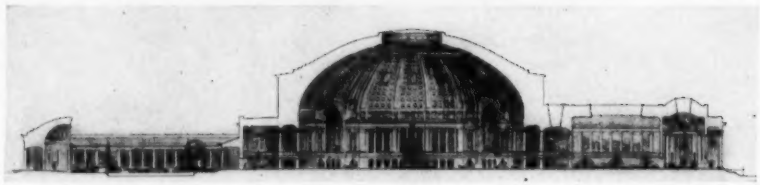


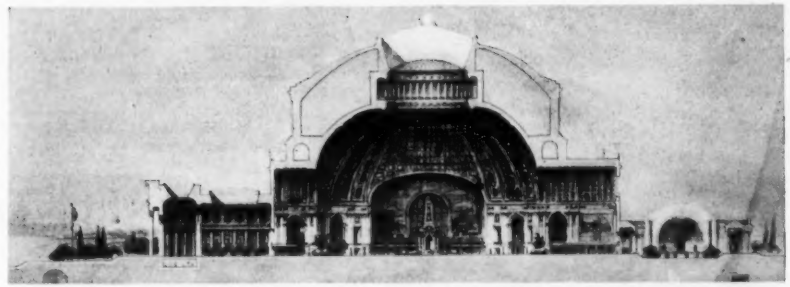








H. S. ATKINSON — PLACED FOURTH (SECOND MEDAL) — T. SQUARE CLUB



R. A. FISHER — PLACED FIFTH (SECOND MEDAL) — T. SQUARE CLUB

FINAL COMPETITION—14TH PARIS PRIZE—SOCIETY OF BEAUX-ARTS ARCHITECTS

DEPARTMENT of SPECIFICATIONS

AN understanding of certain fundamentals of contract law will be of great advantage to specification writers as they will find that such a knowledge will act as a counter-balance to what may be innocent recklessness in the preparation of specifications.

It is admittedly not within the province of this department to expound principles of law as they apply to building construction. In recent issues of *The American Architect* there have been discussed by Mr. Clinton H. Blake, Jr., certain phases of law as applied to work in which the interest of the specification writer centers. Other works of a comprehensive character, covering the multitudinous aspects of what is termed "Architectural and Engineering Jurisprudence" may be found in the technical or legal branches of public libraries or may be purchased from publishing houses that make a specialty of technical and scientific books.

It is advisable that the specification writer study several of these works, almost every one of which carries messages of value to the reader, as such study will reveal the particular pit-falls that one will do well to avoid.

One well established rule of legal procedure is that an appellant must come into court with clean hands. In other words he must have done all he could do in a legal way to forestall litigation and the submission of his difficulties to the courts must not force him to reveal illegal acts that he has done in order to substantiate his side of the controversy.

It is to be understood that the cautious specification writer will so prepare his documents as to avoid any implications of dishonesty, yet unfamiliarity with certain rules of equity may cause the doing of wrongful things in a wholly innocent manner.

If one expects the contractor to perform his obligations to the last dotting of his "i's" and crossing of his "t's" he must, himself, be every whit as meticulous in the formulation of his specifications. It is not equitable to require contractors to do certain things or to furnish certain materials without having set up a standard of perfection that is easily attainable by one who has ordinary skill or who exercises ordinary care in supervising the work of his employes. If the highest grade of work is expected the specification writer must emphasize very strongly his intention to demand the most unusual skill in the execution of the work. It is needless to say that even though such requirements are written into the documents it is not to be expected that they may be obtained.

In the making of two castings of the best grade of what is termed "jewelry bronze work" it is futile to anticipate that one will be a "precise" (exact) replica of the other or that one will be "identical" with the other. No two things can be identical in the strict interpretation of the word and if that is granted as a truism then why use such words when other words, such as "similar," may be used and their strict interpretation demanded when necessary? If the specification writer has had training in the field he will know to what point accuracy is carried in the ordinary or even extraordinary methods commonly used and he should anticipate these conditions and strive to specify the best grade of the quality of work he wishes.

At the same time there must be a recognition of the fact that some construction work will demand, say, the first, or best, grade of workmanship commonly available in the locality while other operations will be entirely satisfactory if the second, or average good, grade of workmanship is provided. A study of local usages, the class of labor available and the necessity of using the one or the other quality of workmanship will determine the standard which it will be most desirable to specify.

If it seems necessary that there be furnished the best grade of workmanship, either in shop fabrication or in field construction, that it is humanly possible to obtain, then a survey of the local contractors who ordinarily would be called on to perform similar work of a lower standard should be made to determine the possibilities of accomplishing the desired result with the facilities available. Oftentimes it will be found that the specifications must create a standard lower than desired (perhaps because of financial limitations or because of medium grade resources at hand) or else to maintain the high standard and then permit only those to submit estimates who are known to have the ability to execute the work.

It is well at this point to bring up once more the matter of control over the securing of bids that the specification writer should have. Where the work of an organization is of a diversified nature the specification writer should advise as to the contractors who are to be invited to submit bids to a far greater extent than in that organization which is fortunate enough to be able to specialize on one, or possibly two, classes of buildings, in each case the ruling thought being to secure the best possible execution of the work. It is not entirely fair to invite a contractor of questionable ability or who is known to use questionable practices in his work to submit a bid

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based on specifications that one can be reasonably sure will not be met by that person. It is unfair to the contractor, the owner and the architect and is one of the reasons why a desire for low bids (too low to accomplish the desired standards) oftentimes leads to such great grief for all concerned in producing a happy result. The specification writer should, at all times, if he himself is not in charge of the solicitation of bids, see that the one having jurisdiction of such matters understands thoroughly what requirements have been laid down in the specifications.

In his "Notes on the Law of Contracts" in the book, *"Specifications and Contracts,"* written by J. A. L. Waddell and John C. Wait, Mr. Wait says:

"All Parts Will Be Reconciled If Possible.—If the court can find a construction or interpretation that will harmonize with both or all of the several parts of the contract, viz., the plans, specifications and covenants, it will adopt that meaning. The meaning which is consistent with all parts.—So, when specifications required walls to be plastered with K. & Co's Cement under the direction of the Superintendent of K. & Co. and the specifications also required that cement and sand should be mixed in equal parts, it was held that effect should be given to each requirement by holding that the Superintendent's powers extended to the laying of the cement plaster and that the contractor was bound by the proportions named in the specifications and that the contractor could not change the proportions even though the Superintendent did consent to it."

"Construction Against Party Using Language.—Another point of law to be considered in the interpretation of clauses which are in conflict, is that the courts will usually construe the terms most strongly against the party who first used them or who prepared the contract. This rule of construction is generally applied, *except* where the government or the public are parties, in which case it is usually held that the meaning will be adopted which is most favorable to the government or public, the courts holding that the interests of the public should be protected, because there is, presumably, nobody who has the interest in public welfare that he has in his own."

It is plain, common, good business judgment always to lay down rules of procedure that will permit of harmonious relations between all those involved in the execution of the work. It is not within the province of good specifications that they exhibit the profound knowledge of their author when it is known from the beginning that the results they are to accomplish cannot be accomplished, regardless of the nature of the structures. Mere words will not obtain good workmanship or good materials. The drawings, details, specifications and agreement of contract, all must be prepared with fair-mindedness and with self-evident intentions that the contractual interests of the contractor will be guarded just as jealously as those of the owner or the third-party interests of the architect.

A great deal has been said with respect to ethics and there has been much discussion as to how much control over business affairs the fundamentals of ethics should have.

Ethics naturally presupposes that there will be a sense of man's moral obligations to his fellow men in all the affairs of business life and that if he demands certain obligations he will submit himself to similar or correlative obligations. Too often building contracts have carried stipulations that the contractor must do everything and subject himself to the whims of the architect or his superintendent and, at the same time, say to him that, even though he is held by the throat, he must not protest but should at all times bear a happy mien. Such conditions, it is gratifying to note, are being remedied by a more universal use of the contract documents prepared under the auspices of the American Institute of Architects and it will be a happy day when every one uses them. It is not to be understood that they are perfect but they are so much better than other forms that they may be used with assurance that the conduct of the work under their guidance will be of credit to all.

However, it is not to be supposed that the use of these contract documents will remedy inaccuracies in the body of the specifications, nor will they be of assistance in clearing up ambiguity, forgetfulness or attempts to force the contractor to do things directly opposite to incorrect indications on the drawings. The specification writer must not think that if disputes arise they can be settled amicably under the provisions for arbitration. One of the parties to the contract can refuse to submit to arbitration without damaging his future case in the courts and in such an event of what use will this clause be? At least one authority on contract law has advocated the abandonment of the arbitration clauses because they cannot be enforced.

These conditions should act as a guide to the specification writer and cause him to be extremely cautious in the preparation of the specifications so that he will feel that ethically he is right and that legally or equitably he has done the best he could to make all conditions fair and possible of accomplishment without disputes or financial losses. He should understand that in an attempt to render judgment the court will be guided almost entirely by the contract documents as they lie before him and that his judgment can not be influenced by what was meant or what was in the mind of the author unless the documents substantiate these intensions. If there has been expressed in the contract and in the drawings and specifications an honest attempt to treat the

parties to the contract with all fairness and if they are supplementary, one to the other, to such a degree that their purpose can not be hidden then the judgment of the court will not fail to conform to the facts in the case. Personal experience has shown that judges invariably follow the rule of law as expressed above by Mr. Wait and the lessons learned substantiate the conviction that if you would expect fair dealing from the contractor you must deal fairly with him in all things. Firmness of purpose can be reflected in the proper preparation of specifications but it is ridiculous to be harsh in one clause, lenient in another and what may be termed lackadaisical in a third. A straight course of fair dealing must be followed from the beginning to the end of the specifications and if this is done it will result in a smooth and pleasant progress of the work from its inception to its completion.

This matter of a thorough understanding of the fundamentals of contract law as applied to building construction should not be treated lightly and, on the other hand, it should not be taken so seriously that the specification writer feels he has a thorough understanding of the principles in detail and can rely on his own judgment as to what to do and what not to do in particular cases. An axiom that should be well known is that "A slight understanding of law is more dangerous than ignorance." This is perfectly true but the point that is brought out is that if the specification writer has a fairly accurate understanding of what *not* to do he will be so guided that the specifications he prepares will be above the current average documents. When intricate legal problems may be involved the services of counsel trained in building law must be availed of, otherwise a good ending will be fortuitous rather than intentional.

If suggestions that have been made in this and in previous articles in this department are followed the specification writer can not fail to do his work in an excellent manner and will find that he will not be bothered by legal disputes and controversies that are inimical to the welfare of his organization. His work will be accomplished so carefully that he will not have to look to the right and to the left at every step but will be able to drive straight ahead to the goal without being distracted by doubts and misgivings.

In all circumstances the specification writer must exercise his ingenuity, he must always be on the alert to avoid doing those things that lead only to disaster and should endeavor to know what he should not do as well or perhaps better than what he should do. If "don'ts" are thoroughly understood and their teachings religiously followed then the specification writer should have no great difficulty in procuring workmanship and material in conformity with the requirements of the drawings and specifications.

Many specification writers are finding that these principles, when faithfully followed, bring to the construction work the cordial relationships that are so essential and it behooves all those who must prepare specifications to devote sufficient time to an analytical study of their problems so they may be prepared to turn out their work in the days of extremely busy times that will come in the not far distant future.

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THE ANCIENT CLIFF DWELLERS IN UTAH

A CORRESPONDENT to the *Times* of New York describing the work of an expedition sent out by the Museum of Natural History to Grand Gulch, Utah, says in part:

N. C. Nelson, American curator of the museum, conducted the expedition and brought back, besides extra specimens and determinate data, some new light on the relative ages and time of settlement of the cliff dwellers of the Southwest. These Indians, who built many-roomed apartment houses in caves and at inaccessible points on the sides of overhanging cliffs, constitute an archaeological phenomenon whose importance is not appreciated in this country.

Pueblo culture is 4,000 years old and manifested itself in 2000 B. C., as now, in communal villages, each being one large house of many rooms, like a hotel. The building was of stone inlaid with clay; or if stone and clay could not be obtained, mud and sun-dried brick were utilized. The earliest building was done with liquid clay, which was poured in construction as we pour concrete, and left to harden. Women helped in the building, for the fingerprints of women have been found on building remains in the Gulch. The age of the marks is estimated at 3,000 years.

Some form of decoration was given to each room of the cave dwellers' hotel. The Indians either carved or painted pictures of birds, animals or human beings on the walls. These, with the pottery and basketry for which the cliff dwellers have long been famed, undoubtedly comprised their sole furnishing and interior decorating. Near the entrance to a room there is often the imprint of a human hand on the wall. The Indian who lived there put his hand in red paint and then pressed it, palmward, against the wall. Whether this, too, was decoration or a symbol for identification, the owner's "mark" is speculation for archaeologists.

LEGITIMATE PRODUCTION HARMED BY MISAPPLIED SKILL

A WELL known man, writes *Good Furniture* in a recent issue, who had a taste for art, started collecting quite late in life. Speaking one day to an expert, he said he had decided to spend twenty thousand a year on his hobby, and was determined to buy only the best. Shortly afterward, he died, and his head clerk wrote to the expert, asking him to make a valuation, adding that he could not understand why so many dealers had expressed a wish to do this, some of them almost insisting, in fact. On examination the expert discovered that these men had supplied the collector with a number of spurious objects, and, as he had kept all their letters describing them, they wanted to make the valuation to save their reputations.

The effect of collecting as shown is not confined to furniture and paintings, but every kind of art object is subjected to forgery. In china and glass it is carried on very effectively from the forger's point of view. In cases where the pottery has ceased to exist, and there are no living representatives of the original manufacturers, such as the Chelsea pottery, we find so-called Chelsea prices being produced with the old trademark of a crown and anchor forged on each piece.

With forgeries being manufactured daily, it follows that a considerable proportion of our craftsmen are very skilful in their own particular craft. Would it not be much better if they were endeavoring to use their skill on the production of articles that would bear their personal expression? Certainly our age is not lacking in men capable of artistic production. The trouble is that these abilities, all too frequently, are being shunted off in illegitimate directions, instead of being allowed to find expression wholesomely, and for the benefit of, instead of the detriment of, current design in the home furnishing trades.

STATE BUILDINGS IN WASHINGTON

THE movement to erect in Washington, D. C., a group of buildings representing every state in the Union, is meeting with necessary favor. These buildings, it is intended, shall house permanent exhibitions by the various states represented. While it would be many years before such a project could be completed, the completed work would be of inestimable value to the individual states and to the nation as a whole. The United States government would undoubtedly provide the sites for the buildings and would leave the choice of the kind of building and its erection to the states.

Every state in the Union produces within itself sufficient characteristic building material to permit it to erect its building of its own products.

In addition to the exhibitions which would be in the buildings the edifices themselves would be a lasting monument to the progress and commercial activity of each state.

CRESSON TRAVELING SCHOLARSHIP AT UNIVERSITY OF PENNSYLVANIA

BECAUSE of the increase in the expense of living and travel in Europe, the Cresson Traveling Scholarships of the Pennsylvania Academy of the Fine Arts have been increased $200, or from $500 to $700. The scholarships, endowed by the late Emlen Cresson and his wife, Priscilla, are awarded by the directors upon the recommendation of the faculty and the committee on instruction.

DEPARTMENT OF ARCHITECTURAL ENGINEERING

POSTS AND LINTELS

Some suggestions on proportions for architectural designers

IN the State of Illinois the Architects' License Law defines buildings as "structures having walls and roof, with, or without, other parts," the other structural parts being posts, lintels and arches. Posts in modern language are piers if of masonry in which bending stresses do not occur and are posts when of any other material in short lengths, usually one story heights. When relatively long and slender and designed to resist bending they become columns.

Architects are frequently called upon to lay out buildings and prepare estimates of cost without sufficient time to make a structural design. Sometimes the project is tentative and the expense of making a structural design is not justified. The sketches and estimates satisfy the client and the structural designer is put to work. It happens occasionally that the architectural planner fails to allow sufficient space for columns, beams and girders, the result being unsatisfactory to the client. To avoid such mortifying incidents all architectural planners should memorize a few safe dimensions for ordinary building materials.

The architectural possibilities of reinforced concrete. Cantilevered columns to carry travelling cranes and working platforms in a high narrow room spanned by deep beams suggest medieval halls.

The design begins with the floor. For floors carried on joists, the tongue and groove flooring should be not less than ⅞-in. thick if single. Thinner flooring should be used only when laid over sub-flooring of surfaced boards. The maximum span for loads in dwelling houses may be 24-in. while for office floors it should not exceed 16-in. Laminated floors in ordinary office buildings may have a thickness in inches equal to one-fourth the span in feet if some slight deflection is allowable. To keep the deflection within limits which will not crack plaster on the underside, the thickness in inches should be not less than one-third the span in feet. For floors of light manufacturing buildings the thickness in inches should be not less than one-third the span in feet and if deflection is to be limited the thickness in inches should be not less than one-half the span in feet.

Floor joists should have a depth in inches of not less than two-thirds the span in feet. This is a safe rule to follow. Beams carrying laminated floors or joisted floors should have a depth in inches not less than one-half the span in feet for ordinary loads. For the loads required in light manufacturing buildings, as well as for buildings where deflection is to be limited beams should have a depth in inches not less than two-thirds the span in feet. This applies as well to girders, but it is better slightly to increase the proportion of depth for girders better to obtain stiffness and resist shear. For girders it is well to allow a depth equal to one-tenth the span and increase this to one-eighth the span for very short girders carrying loads concentrated at mid-span. The difference between beams and girders is that beams carry uniformly distributed loads and are themselves supported by girders, excepting of course such intermediate beams as may run into columns. Girders carry concentrated loads, represented by the end beam reactions, and shear is a force to be reckoned with for this reason.

The foregoing rules for allowances for beams and girders of wood apply as well to steel and reinforced concrete. In the latter two materials some saving in depth may be effected but it is well to leave such niceties to the structural designer. For heavy concentrated loads such as tanks and machines provide space for a beam having a depth in inches equal to the span in feet. Occasionally a

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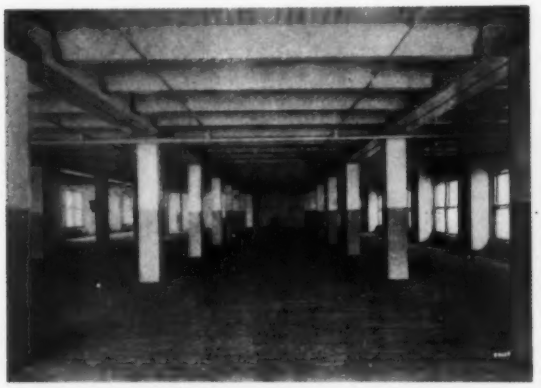
series of spans, some short and some long may be required to carry machinery. The depth allowed for beam or girder for each span should be in

Timber. Mill construction with long span laminated floors. Two piece girders resting on metal post caps.

inches equal to the longer span in feet. Within this space the structural designer will be able to fit his supports without trouble. The space allowed for widths of all beams and girders should be not less than two-thirds the depth.

A deep narrow beam, or girder is the most economic. The stiffness obtained by increasing the depth is an additional advantage. Whenever an architectural design permits the use of beams and girders with depth equal to, or greater than, one-tenth the span the structural designer will find his problems simplified.



Timber. Semi-mill construction with beams carried on stirrups instead of resting on girders. This effects saving in brick but reduces fire resistance.

Size of Bays

In business establishments floors are divided into bays, the general design being affected by many factors peculiar to the business but most strongly by considerations of commercial sizes of material, story heights, etc. Usually the greatest economy is obtained by using the smallest practicable bays for the industry which will occupy the building. Changing character of occupancy must also be considered so the building may readily rent in the event that the tenant for whom the building is erected removes in the future to another location.

For a general purpose building a span of less than 12 feet will reduce renting value and 18 feet may be considered as close to the maximum pos-

Reinforced concrete. Top floor of an administration building. Long span slabs on beams carried by columns. No intermediate girders. Square columns are inferior to round columns in case of fire.

sible for heavy timber construction. When a building is to be of heavy timber construction spans of 14 feet to 16 feet are commonly used unless the owner is willing to wait a long time in order to secure large timbers from the mill. All wood should be well seasoned before going into a structure so it is wise to obtain from local dealers information on sizes of the largest timbers they carry in stock.

Reinforced concrete. Depth of beams and girders practically equal. Wires go through lower half of beams.

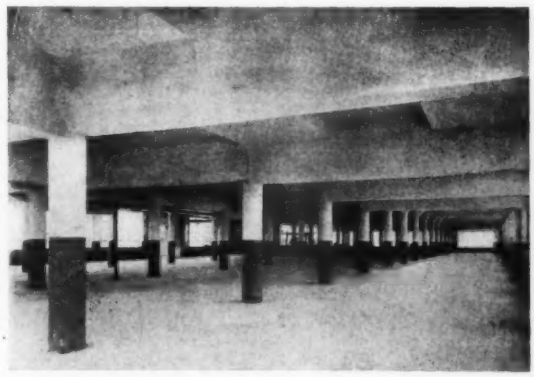
With steel and reinforced concrete the greatest limitation on span length is fixed by the ratio of depth to span. The head-room being fixed it is measured to the bottom of the deepest girder or beam. All space above this necessary head-room is waste. It can seldom be well ventilated and the

cost of heating it, together with the interference with proper lighting caused by deep beams are factors deserving of consideration. Another objection to deep beams lies in the increased amount

Reinforced concrete. Deep, narrow beams and girders. Heavy cantilevered columns for traveling crane. Wires go through lower half of beams.

of wall, which, in a number of stories may amount to that necessary for an additional story. Economic design calls for the least possible depth of floor and the longest spans consistent with this depth.

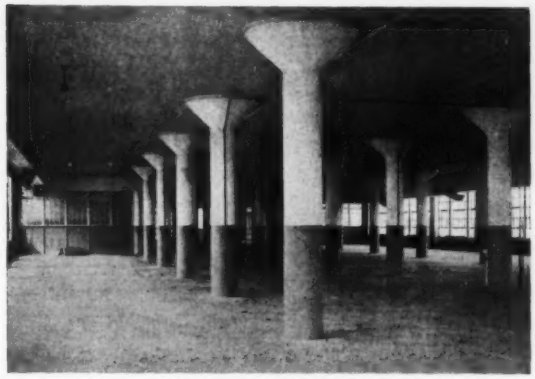
The economic span of 18 feet for wood is fixed by the difficulty in obtaining timbers of suitable size in lengths greater than 18 feet. This diffi-



Reinforced concrete. Special design with deep, narrow girders carrying wide, shallow beams. Round columns.

culty does not exist with steel but the objections to deep beams place a practical limit of about 22 to 24 feet on steel construction. Even then girders will show below the general ceiling level which is obtained by plastering on lath attached to the underside of beams. The additional floor thickness called for in longer spans adds to the number of bricks in outside walls.

Reinforced concrete made possible the "girderless slab" or "flat slab" as it is usually styled. This is what the name implies, a flat slab resting on columns without girders or beams. For a superimposed load of 100 lb. per sq. ft. the total thickness of the slab will be 6¾-in. for a panel 16 ft. square and 11¼-in. for a panel 26 ft. square. For a superimposed load of 300 lb. per sq. ft. the total thickness of the slab will be 10¼-in. for a panel 16 ft. square and 18 in. thick for a panel 26 ft. square. The figures given apply to slabs resting



Reinforced concrete. Girderless floor carried on large column capitals without drop heads.

on enlarged column heads. When a square "drop head" is cast on the column head for the slab to rest on the slab thickness may be reduced one or two inches depending on the span. The drop head, however, will have a thickness of not less than half the slab thickness and is not ornamental.

The flat-slab was a development from the use of shallow beams of reinforced concrete having

Reinforced concrete. Girderless floor carried on drop-heads. Columns and capitals are round in order to offer maximum resistance to fire.

depths equal to one-twentieth to one-twenty-fourth the span and widths equal to one-half the span. Reinforced concrete deflects a very small amount under load compared to wood and steel. The

flat-slab is heavy and contains a great deal of material. It is economical principally because the form work is not complicated.

Piers, Posts and Columns

An architect will seldom take advantage of the possible slenderness of vertical supports as he wishes to obtain artistic proportions. Vertical

Reinforced concrete. Girderless floor on drop-heads. Corrugated iron used in forms to give ornamental ceiling.

supports are therefore generally built out with lath and plaster, which incidentally adds to fire resistance.

To obtain sizes of posts it is necessary that some estimates be made of weights and the sizes of posts should be taken from hand books. Roughly

Reinforced concrete. Girderless floor carried on drop-heads supported by large column capitals. The columns are octagon in shape to harmonize with the square capitals and at same time resist fire practically as well as round columns.

speaking, the structural designer will not be hampered if the architectural planner assumes the diameter or smaller side of all posts in inches as equal to the clear height in feet.

Brick or stone piers should have the least thickness equal to one eighth the height for such preliminary sketches as are considered in this article.

ECONOMY IN STEEL DESIGN*

ONE secret of reducing cost of fabrication and cost of construction, according to Mr. Fleming, is standardization. Following the standardization of timber sizes and steel sizes came the long desired standardization of brick size in 1920.

According to Mr. Fleming, in 1916, on an average job, a division of the money spent in producing the structure would indicate that labor cost about 30 per cent. and material purchased about 70 per cent. of the total. Today the division would be approximately 40 per cent. for labor and 60 per cent. for materials, and it is predicted that in the near future, owing to the rising price of labor, this division will be more nearly 50-50. As the labor cost increases it becomes self-evident that more and more material can be used, if thereby labor can be reduced.

Blue-prints for a building recently submitted showed a total of 54 footings. These footings were in the form of truncated pyramids with a square or rectangular base. Slight variations in the size and shape of the base and of the top on which the column rested resulted in nineteen separate types of footings. Of this number, fourteen occurred once, two occurred twice, one three times, one occurred five times, one twelve and one sixteen times. The footings as detailed doubtless save some concrete over that required by simple steps, but the saving was made at the cost of some very fussy and expensive form work. The simplicity of forms for stepped footings goes far to offset the cost of the small additional amount of concrete involved.

Erection

Mr. Fleming believes that a great opportunity for the draftsman exists to make erection as easy as possible. Close fits and entering connections should be avoided. The caution regarding unnecessary shop rivets applies with added force to field rivets. There are many devices for attaching the work of other contractors that will eliminate drilling holes.

**The first installment of this article appeared in the issue of August 31.*

Practical construction superintendents say that if it is necessary to have rivets at isolated points it is cheaper to drive two rivets than one.

Seats for beams and girders are often worth their weight in gold.

Close co-ordination with the erection department from start of design to finish of fabrication always lessens cost of erection.

In through plate girders be sure that floor beams can be erected without spreading the girders. It should not be necessary to tip columns to put in place beams or girders.

Avoid too many changes in rivet sizes. Sometimes it is cheaper to increase sizes of some connecting members than change rivet sizes for a small number of connections.

Purlins should be placed in the upper or peak side of clips. They are thus prevented from sliding down the roof before being bolted.

A decided reduction in the cost of erection can often be brought about by the use of bolts instead of rivets for field connections. The specification for a twelve-story apartment house in New York City has the clause: "All connections within 3 ft. of the column centers must be riveted. All tank and sheave beam supports must be riveted. Other connections may be bolted." In this particular building the beams upon which some columns depend for lateral stiffness do not connect directly to the columns, but frame a foot or two away into other connecting beams. Mr. Fleming asks: "Is not this a commendable cause for similar cases?"

He believes that bolted connections are permissible for the following:

Buildings of one story, not of great height and acting mainly as shelters. Such buildings carry no shafting or electric traveling cranes and unless exposed to unusual winds there is little reason why field connections may not be bolted throughout.

Buildings for temporary use.

Subordinate framing such as that required for stairs, doors, windows, partitions, ceilings, moniters, pent houses, curbs and railing. It is often desirable, if not necessary, to have framing around windows, doors, skylights and similar work bolted in order to secure proper adjustment for the work of other contractors.

Purlins and girts, except where they form an integral part of a system of bracing. There is little reason why the clips to which purlins and girts are attached should not be shop-bolted, instead of shop riveted, to main members. The same is true of many connections for subordinate framing.

Platform and floor plates. If there are trucks moving on the floor, or there is shoveling of coal or material, countersunk-head bolts should be used. An indentation in the head is convenient to hold a bolt while the nut is being turned. In other cases bolts with button heads not over 1/4 or 5/16-in. high may be used.

Connections of beams to beams and beams to girders in floors that do not support machinery, shafting or rolling loads. This is an important item in a many storied office building or hotel. If the connections of floor members to columns are riveted the structure is stiff transversely and longitudinally. Little is gained in stiffness and much is added to expense by riveting connections of filling-in members. Moreover, in fireproof construction the bolts are embedded in concrete, a fact which should assure any doubter that there is no chance of nuts becoming loose.

Bracing connections not subject to direct stress. This refers particularly to the intersection of bracing angles midway between trusses and columns. An overzealous inspector will sometimes insist upon specifications being carried out to the letter and that rivets be used. This necessitates riveting from a special rigging at a cost of a dollar or two per rivet. The cost would not be a valid objection provided anything were gained by it.

Connections are subject to shearing stress at points where members rest upon other members.

The foregoing list is a conservative minimum. Mr. Fleming believes that in many cases it may be extended, in which opinion he is by no means alone.

The Time Element

Mr. Fleming concluded his valuable paper as follows:

"An element entering into the cost of steel structures that should not be overlooked is time. A structure wanted in an abnormally short time can usually be obtained only at an abnormal price. On the other hand, delays preventing normal procedure are always expensive. A delay may occur in furnishing complete information to the drafting room. Probably there is nothing that increases the cost of drawings so much as incomplete or incorrect information at the start.

"A change in a single figure is often far-reaching and the liability of error is great. Besides the morale of a drafting force is liable to be broken if called upon to discard work upon which much time thought has been spent. When it comes to fabrication some sizes may not have been received from the rolling mill which necessitates putting aside the members affected. The erector may be held up because of the non-arrival of pieces when needed.

"Delays all mean increased cost, for work in no department can be laid aside and taken up later without incurring expense. In addition there is the loss to the purchaser of the interest on capital during the time it lies idle and the loss due to the interruption of business. Indeed, the fourth dimension of the cost of structures, the mysterious

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path by which costs take wings and mount upward is *time*.

"The claim that all advantages derived from lessening the cost of a steel structure accrue to the fabricating firm is true only for isolated cases. If methods tending to reduce cost are persistently followed a large part of the saving will in the end revert to the purchaser."

WARM AIR FURNACE HEATING

THE question of proper design and proportion of the house heating equipment is of vital importance to those who dwell in regions periodically visited by winter.

Since October, 1918, an investigation of warm-air furnaces and heating systems has been carried on by the Engineering Experiment Station of the University of Illinois, Urbana, Ill., in co-operation with the National Warm-Air Heating and Ventilating Association. The principal objects of the investigation are, briefly, to determine methods of increasing the efficiency and capacity of warm-air furnace heating systems, and also to establish satisfactory and simple codes for testing and rating furnaces, so that the heating equipment may be properly proportioned for the work it has to do.

Bulletin 112 issued in 1919 contained a report of the progress on the work. Bulletin 120, just issued, continues the report of progress to date, in addition to which it describes special apparatus and methods of testing. It is the latest and most reliable information with respect to warm air heating systems.

THE PRESERVATION OF TIMBER

THE American Wood Preservers' Association has recently established a Service Bureau with offices in the Otis Building, Chicago, Ill. The policy of the Service Bureau is to disseminate information on the preservative treatment of woods and aid architects, engineers and contractors in wood preservative problems.

NOTES ON SELECTING LUMBER

SPECIFICATIONS often call for "virgin growth" or "second growth" timber, yet the terms are without fixed significance, and the material when delivered cannot be positively identified as belonging to one class or the other, says a writer in *Technical Notes, No. 153,* published by the Forest Products Laboratory, U. S. Forest Service, Madison, Wis.

"Virgin growth," also called "first growth" or "old growth," means timber which grew up in a standing forest under conditions of active competition for sunlight and moisture.

"Second growth," when applied to a forest stand, usually means timber whose main growing period occurred under conditions of lessened competition, after all or a portion of the original stand had been removed by cutting, fire, wind, or other means. In connection with individual trees, the term is used to mean any whose growing conditions approximated those which would produce a "second growth" stand. To the wood user, "second growth" means material cut from either of these sources. In general, the term is associated with the idea of a second crop of timber, though specific applications may vary.

Virgin growth is generally thought of as slow growing timber, while second growth, due to more favorable conditions, is relatively rapid. A faster rate of growth is evidenced by wider annual rings. These are popularly supposed to indicate stronger and tougher wood in the hardwoods, such as ash, hickory, elm, and oak; and weaker and brashy wood in the conifers, such as pine and fir. Hence, for uses in which strength and toughness are essential, second growth is sought among the hardwoods, whereas in conifers virgin growth is desired.

As a second growth forest attains maturity, the rate of growth slows up, and the annual rings may be no wider than in virgin growth timber of the same size. On the other hand, when a slow-growing suppressed forest tree is freed by removing the neighboring trees, it may grow rapidly for a long period. Therefore it is possible to have some wood with the characteristics of virgin growth and some with those of second growth in the same tree. Furthermore, individual trees in a virgin growth forest may have the characteristics of second growth throughout and vice versa.

Instead of broadly specifying "second growth" or "virgin growth" or depending upon requirements on the width of annual rings to secure good material, the Forest Products Laboratory considers it advisable to disregard rate of growth and rely upon density as a guide to quality.

BUILDING STATISTICS FOR 1920

THE following data were furnished by the Civic Development Department of the Chamber of Commerce of the United States.

A blank soliciting the required building information was sent out to the 288 cities in the country having a population of 25,000 or over. Their total population was nearly 38 million. Of these, 131 cities, with a population of 81.5 per cent. of the total, reported.

"It is interesting to note," says the report, "that of the estimated one billion, forty three million dollars spent on buildings in 1920 in the cities reporting, more than 36 per cent. ($382,307,000) were devoted to dwellings. Factories and work shops came second with 16.8 per cent.; stores and

mercantile buildings third, with 13.3 per cent.; while office buildings and garages tied for fourth place with 8.2 per cent. each. Schools, hospitals and charitable buildings together called for 5.4 per cent. or $77,388,000. Amusement places cost more than churches, hospitals or public buildings, the sum being $38,637,000.

"If the rate of building in the non-reporting cities was the same as in those which reported, the total number of building in all the cities of 25,000 or more population may be estimated at 195,000, at an estimated cost of $1,280,000,000."

BUILDING TRADES WAGES IN SCOTLAND

THE following figures were given in the July 29 issue of *The Architect,* London, England, and were supplied to that paper by the Scottish National Building Trades Federation. The figures as printed were in English monetary units and are here reduced to United States units on the basis of one penny being equal to two cents. This makes possible a comparison of wages in 1914 before the great fluctuations commenced in international exchange.

Rates per hour in 1914

	Edinburgh	Glasgow
Bricklayers	$0.20	$0.22
Glaziers	.19	.19
Joiners	.21	.21
Masons	.19	.21
Painters	.19	.20
Plasterers	.19	.21
Plumbers	.20	.21
Slaters	.19	.20
General Laborers	.12	.14

In November 1920 the wage for all the building trades was fixed at 56 cents per hour for Class "A" districts, 54 cents per hour for Class "B" districts and 50 cents per hour for Class "C" districts. The pay for all building laborers was fixed at 46 1-2 cents per hour, irrespective of districts. Effective March 16, 1921 all wages were reduced by four cents per hour and a sliding scale was adopted which is based on the cost of living.

Between 1914 and 1920 the cost of living in Great Britain increased nearly four times. It may therefore be seen that in the skilled trades wages did not advance proportionately, therefore such men had to adopt a lower standard of living. The increase in pay of ordinary laborers kept pace with the cost of living, so their standard of living was undisturbed. These phenomena resemble those in all countries affected by the war, the upper and lower classes of society experiencing little disturbance while the middle class has experienced a violent re-orientation.

The figures presented make possible an interesting study. They show that wages in Great Britain are on the average about one-half as high as wages in the United States, so that when the world settles down a bit more the competition is going to be severe. The present exchange rate makes British wages really about one-fourth smaller than here shown. The superior efficiency and greater output of the American easily wipes out the exchange handicap, but the normally lower wages in Great Britain and lower standard of living of British workmen indicate that we are facing a long hard fight in the world's markets. The table of wages here presented is interesting when compared with the table presented on page 131, issue of Aug. 17, of The American Architect.

EMERGENCY HEAT FOR SPRING AND AUTUMN

THE central heating plant, whether it be hot air, hot water or steam, lacks flexibility, an advantage possessed by the old time heating stove and the open fireplace. With these heating units the chill of Autumn and the dampness of early Spring were robbed of their discomforting effects by small fires which were burned for the few needed hours. Maximum comfort was thus secured, for the rooms heated quickly and were quickly cooled by simply letting the fires burn out. The expense was also small.

The central heating plant is so ordinary today that many dwellings, small homes as well as the largest apartment houses, have but one chimney with no provisions for putting stoves in any of the rooms. It is rare that practical fireplaces are built in modern houses, the result being great discomfort during the months when the furnace gives out too much heat when the sun is shining. Men who own their homes wastefully burn much fuel to obtain necessary warmth in early morning and late evening hours, keeping dampers closed and doors and windows open nearly all day. From time to time the fire is permitted to go out, with all the attendant discomfort. Tenants of apartment houses lack even this amount of control, being subject to the vagaries of janitors who often live in stove heated basements, and the owner who counts the burning of coal as a wasteful increase in overhead.

Architects should persuade their clients to provide properly constructed chimneys for stoves, or fireplaces, in order to save heating expense and provide increased comfort during cool days in the Spring and Autumn. The expense, for a house of medium size, will be balanced by the coal saved in six years, for the writer kept cost figures on two identical houses for a period of nine years, one be-

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ing supplied with one chimney for furnace only and the other with an additional chimney for a fireplace on the ground floor and a stove on the second floor. The difference in comfort cannot be expressed in dollars, especially when the auxiliary heating is available in case of illness and is enjoyed by elderly members of a family on days when the rest of the family is perfectly comfortable without it.

HAZARDOUS HOME CLEANING FLUIDS.

UNDER the above heading The National Board of Fire Underwriters asks that information about dangerous cleaning fluids be widely disseminated. In drafting offices many tracings are cleaned with these fluids and the warning is as necessary for draftsmen as it is for their wives who clean small articles of dress at home.

Cleaning preparations consisting wholly of carbon tetrachloride are safe from a fire standpoint; in fact this liquid is valuable as an extinguisher of small fires in confined places.

Carbon bi-sulphide is said to be sold by some druggists as a safe preparation, when it is, in fact, classified as the most hazardous of inflammable liquids. It is more explosive than gasoline because of its greater volatility. Its vapors will ignite at comparatively low temperatures without either spark or flame being present. The heat of a steampipe, for example, is sufficient.

Not only do some men sell carbon bi-sulphide as a safe cleaning fluid, but some sell a mixture of carbon bi-sulphide and ether, which makes the matter still worse. The efficiency of gasoline as a solvent has made its use in cleaning an every day occurrence, with many accidents. A half-cupful of gasoline poured into a kitchen sink flashed vapor to a gas stove several feet away and caused the death of a woman who had started to clean her gloves in the gasoline.

Gasoline vapor has been known to flash a distance of over 100 feet. The vapor from one gallon of gasoline, when properly mixed with air has an explosive power equivalent to that of eighty-three pounds of dynamite.

When there is any doubt about the safety of cleaning fluids now on the market, inquiry should be made of the fire chief or a local fire insurance agent as to whether it has been examined by the Underwriters' Laboratories. The fire hazards of cleaning fluids differ considerably. Certain of those upon the market have been approved by the Underwriters' Laboratories as being non-combustible and non-inflammable. Others are classed as being burnable but not giving off dangerous, highly inflammable vapors. Good fire protection is almost entirely a matter of education and architects are happily placed to impart proper knowledge on the subject.

FIRE RISK IN SCHOOL HOUSES

A RECENT publication of the National Fire Protection Association shows that of all the school buildings in the country only 5 per cent. are of Type A, constructed entirely of fire-resistive materials. Thirteen per cent. are Type B, with fire-resistive construction as to walls, floors, stairways and ceilings, but with wood, or composition floor surfaces, and wood roof construction over fire-resistive ceiling. Seventeen per cent. are of Type C, with masonry walls and fire-resistive corridors and stairways, but with combustible floors, partitions, roofs and finish. Forty-four per cent of the school buildings are of Type D, with masonry walls, but otherwise with ordinary joist construction and wood finish. Twenty-one per cent. of the schools, including the old-time country schools, are of Type E, with wood construction. This shows that 80 per cent. of the schools are firetraps, in spite of the numerous warnings which have been given on the dangers of such construction by serious losses of life. Little children are entitled to every possible protection, and fireproof construction should be required by law for every school building more than one story high.

One prominent insurance company reports that for the past five years its loss ratio on brick buildings has been 65 per cent. in protected towns and 115 per cent. in unprotected towns. On frame buildings the loss ratio was 138 per cent. in unprotected towns. On contents the loss ratios were 64 per cent. for brick protected, 76 per cent. for brick unprotected and 116 per cent. for frame protected. Many other companies have an equally bad schoolhouse record.

Ohio requires that all school buildings more than one story high must be of fireproof construction, and the fire prevention regulations are strictly enforced by the state fire marshal, who also makes specially careful inspections of schoolhouse risks. These laws were passed after the burning of the Collingwood School in which fire 150 children lost their lives.

THE AMERICAN SPECIFICATION INSTITUTE

127 No. Dearborn St., Chicago

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THE American Specification Institute has been founded on the theory that the interchange of knowledge concerning specifications that it is possible to obtain in an organization whose members have made or are making a study of the art of specification writing will result in their improvement, to the benefit of all those concerned in their use. The Specification Institute is national in scope and it solicits the support of all specification writers, architects and engineers who design or supervise the construction of buildings, engineering structures, mechanical equipments for buildings and structures of all kinds and all work whatsoever in which materials of construction or building equipment are used.

The program of organization of The American Specification Institute contemplates a detailed study of the materials and methods used in construction work, the economics of building construction so far as specification work is properly dependent on the principles of construction economics and the means of accomplishing specification documents that are clear, concise, coherent and that can be understood by the courts.

The need of such an organization, i.e. one that will devote its energies exclusively to all phases of specifications, their preparation and use and that will make these studies under the guidance of men trained in the work, has long been recognized. The following letter, recently received from one of our members, expresses, in a very clear manner, the benefits that the average specification writer will derive from the Specification Institute.

"It is with a great deal of pleasure that I send you my application for membership in The American Specification Institute. The explanatory matter which you have sent me has been read with a great deal of interest and with profit.

"For a number of years I have been trying to produce specifications that will come through to the completion of the work without having serious errors brought to my attention. Of course minor errors that, from the sense of the clause or paragraph, are apparent are to be expected to some extent but errors that are ridiculous or that result in embarrassment or financial loss are to be guarded against with the greatest of zeal.

"Do not misunderstand me in this. I do not anticipate that the Institute can, for me and in my behalf, eliminate such errors but it does seem to me that a body of men who are experts in specification work could devise some means of checking the manuscript or of checking the drawings so that one could be reasonably sure of having included all necessary matter and at the same time be sure that all ambiguity or careless wording has been kept out.

"It is my view that what the specification writer needs, more than standard specifications (to some the word 'standard' is detestable) is an orderly collection of data pertaining to the work, which I understand you propose to compile and authoritative instructions respecting the fundamentals of specifications. It then would be the duty of the specification writer to perfect himself by study and observation and the assistance of the Institute.

"I shall be happy to be of whatever assistance I can in the carrying forward of the good work you have commenced."

The above letter is typical of others that have been received and of conversations the Acting Executive Secretary has had during a recent trip through the eastern territory.

The Annual Fall Conference

The Board of Governors has received a suggestion that there be held in Chicago in the early fall a Conference of those members and others interested in the work of the Specification Institute in order that an intimate discussion of the problems confronting specification writers may be had.

The Board of Governors is now formulating a program for such a conference and it is expected that the date may be fixed during the coming month.

The success of such a conference will depend, in a great measure, on the attendance of members and it is believed that much of value will result from it. Members who may wish to visit Chicago during the fall are earnestly requested to make their arrangements fit in with the conference if at all possible.

Papers discussing various phases of specifications will be read and it is expected that discussions with respect to co-operation with other national or local organizations having committees at work on the study of matters which are intimately related to specifications will lead to immediate steps toward a more universal use of the facilities offered by The American Specification Institute.

Prospective members and others interested in the activities of the Institute are requested to communicate with the Executive Secretary's office. In the interim, if copies of *The American Architect* are available to the reader he may read with profit the issues of February 16, 1921 and of June 22, 1921 and subsequent issues.

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PERSONALS

THUMB TACK CLUB OF DETROIT TO HOLD EXHIBITION

AN Architectural Exhibition is to be held, under the auspices of the Thumb Tack Club of Detroit, in the galleries of The Detroit Institute of Arts, October Seventeenth to Thirtieth, inclusive.

Inquiries regarding Exhibits and Year Book may be addressed to Mr. Wm. E. Kapp, 710 Washington Arcade, Detroit.

Oscar H. Drouin has opened an office for the practice of architecture at 73 Main Street, Woonsocket, R. I.

D. S. Pentecost, architect, who was previously located at 330 Adams Street, Gary, Ind., is now practicing at 705 Connecticut Street, that city.

Announcement is made that Joe H. Wildermuth & Co., architects, have opened architectural offices at 690 Broadway, Gary, Ind.

The architectural offices of H. C. Deckbar, architect, have been moved to 1006-7 Wright & Callender Building, Los Angeles, Cal.

Frank G. Krucker, architect, wishes to announce that he will retain offices for the practice of architecture at 520 Ferguson Bldg., Los Angeles, Cal.

C. M. Hutchinson, formerly associated with the architectural firm of Walker & Eisen, has engaged in private architectural practice at 427 Security Building, Los Angeles, Cal.

It is announced that H. L. Staves, landscape architect, has opened an office for the practice of architecture at 1216 Grand Avenue, Des Moines, Iowa.

George Feltham, architect, of St. Petersburg, Florida, has opened a branch office in Clearwater, Florida, and requests samples, catalogues, etc., for his files.

It is announced that Charles Fallen, architect, is now practicing architecture at 206 Touraine Building, Fort Worth, Tex. He is desirous of receiving manufacturers' catalogues and samples.

Harold E. Hall, registered architect, formerly of Westwood, N. J., is now associated with Hester, Interior Decorators, 425 Seventh Avenue, New York City.

George F. Kessler recently resigned from his position as landscape architect for the Cincinnati Park Commission, having served in this capacity since 1907.

Simpson & Githens, architects and engineers, have dissolved partnership and the business will continue at the same location, 869 Reibold Building, Dayton, Ohio, under the name of E. F. Simpson.

An architectural partnership under the firm name of Kuehn & Walsh has been formed by Earl Walsh and F. C. W. Kuehn, both of Huron, S. D. Their offices are in the City National Bank Building, Huron.

Calrow, Wrenn & Tazewell, architects, New Monroe Building, Norfolk, Va., have changed the firm name to Calrow & Wrenn, with offices at the same location, Mr. Tazewell no longer being associated with the firm.

George B. Ford, architect and city planner, 132 Nassau Street, New York City, recently received word that he has been awarded a gold medal by the International Planning Exhibition at Ghent, Belgium, for his plans for the reconstruction of Rheims, France. The reconstruction is already under way.

According to recent press announcements, Lloyd Morgan, a New York architect, has been awarded the annual Paris prize of the Society of Beaux-Arts Architects, providing $3,000 for two and one-half years' study at the Ecole des Beaux-Arts in Paris. Mr. Morgan won the award by offering the best plan for "an exhibition center."

Announcement is made of the formation of the firm of Batchelder & Scales for the purpose of conducting a general architectural and structural engineering business, their offices being located at 35 West 27th Street, Indianapolis, Ind. They are desirous of receiving manufacturers' catalogs and samples. Mr. Batchelder is a graduate of the Massachusetts Institute of Technology, and a Rotch Traveling Scholarship and American Academy of Rome man. He was formerly designer for Allen & Collens of Boston, and a partner of the firm of W. E. Russ & Co., Indianapolis. Mr. Scales is a graduate of the University of Illinois, and was formerly chief designer for the Lackawanna Bridge Co. of Buffalo. He was also a partner of the firm of W. E. Russ & Co., Indianapolis.

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CHURCH OF S. VITALE, RAVENNA, ITALY